Adult self-learning

CURRICULUM FOR ADULT LEARNERS

Adult Self-Learning: Supporting Learning Autonomy in a Technology Mediated Environment

2019-1-TR01-KA204-076875

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Adult Self-Learning: Supporting Learning Autonomy in a Technology-Mediated Environment

Cooperation for Innovation and Exchange of Good Practices

KA204 - Partnerships for Adult Education

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"ASL"

Intellectual Output	**IO3: Curriculum for Adult Learners**
Project Coordinator	**Saricam Public Education Center, Turkiye**
Deliverable Leader	**Saricam Public Education Center, Turkiye**
Abstract	**With the advent of digital technologies, learners have unprecedented opportunities and a diverse range of options for engaging in self-directed learning via tools and resources available on the internet. However, selecting learning applications and materials requires expert knowledge and expertise, which an autonomous learner usually lacks.** **The following learning modules provide the fundamental notions for utilizing digital technology and the online environment for the teaching-learning purposes.** **Partners developed six learning modules whose content is essential for a learner to use the internet resources, collaborate online, and leverage the opportunities offered by the digital applications.** **The following are the learning modules:** 1. **Social Inclusion and Internet** 2. **Basic Concepts of Online Search** 3. **Basic Concepts of Online Learning** 4. **Basics Concept of Online Interactions** 5. **Basic Concepts of Digital Applications** 6. **Basic Concepts of Online Collaborative Learning**
Keywords	**Digital technology, the Internet, Online teaching-learning, Online self-learning**

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Introduction

With the advent of digital technologies, learners have unprecedented opportunities and a diverse range of options for engaging in self-directed learning via tools and resources available on the internet. However, selecting learning applications and materials requires expert knowledge and expertise, which an autonomous learner usually lacks.

How can a learner in a technology-mediated environment meet his /her learning needs and goals, and how can his/her autonomy evolve effectively in an online environment?

This course is part of the Erasmus+ project “ASL - Adult Self-Learning Supporting Learning Autonomy in a Technology Mediated Environment”, implemented by a consortium of six partners from Turkey, Greece, Italy, Latvia and Poland. The project's specific goals are as follows:

- to teach learners how to acquire new skills and competencies using learning innovative practices and digital technologies;
- to develop a functioning collaborative learning environment to assist them in identifying skill gaps and needs and to collaborate locally and independently for joint capacity-building.

In this context, the project consortium created this training course to achieve the following objectives.

Learning Objectives

This course aims to:

- provide new competences to adult learners through digital resources;
- stimulate/motivate adults to acquire competences that can improve their career and employability;
- promote self-learning;
- empower people to improve their skills in using digital collaborative technologies;
- integrate educational practices such as peer learning, online participatory learning, digital social learning, etc.
- provide people with advice and guidance on how to learn using digital resources.

Module 1. Social Inclusion and Internet

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Learning Objectives

By the end of the Learning Unit, trainees will be capable of:

- become familiar with the concept of digital inclusion
- become aware of the factors associated with digital exclusion
- learn how to find technologies available for digital inclusion
- recognize the main tools used available for digital inclusion
- search for web sources that enable digital literacy and main digital skills
- become aware of the concept of digital storytelling and how to prepare one

Basic Concepts (Key Words)

- Social Inclusion
- Digital Storytelling
- Social Media
- Online Education Resources
- Barriers to Digital Inclusion
- Digital Tools
- Foundation Skills
- 21st Century Skills
- Digital Literacy
- Digital Inclusion

Preliminary Notes

Social Inclusion and Internet

Adult learning is considered to pave the way for taking responsibility for one's own life and actively participating in the development of committees. As we are social beings, we need to find and maintain meanings of life by being actively involved in social life. Those who are socially excluded tend to experience various psychological problems and other barriers in their lives. When adult people are socially included, they have friends; they experience a sense of belonging; they have valued rules in the community; they actively participate in the community; they are involved in activities based on their personal preferences; and they are excepted for who they are within their communities.

Development and rapid improvement of Internet has made it possible to be socially included through various virtual ways. People from all over the world with common interests and problems have the chance to feel that they belong to a community. Use of Internet for social inclusion is therefore could be a good opportunity not only for adults who need social inclusion but also for countries that aim to have socially included citizens.

Adjusting the demands of a modern world, for example the need to use computer and technology and have access to internet, is a major challenge for adults. The digital barriers can pose a threat as they can become elements of exclusion. Both personal attributes and the usability of a technology-users' satisfaction with the ease of use of the devices have an impact on adults' decision to use a technology. Well-planned trainings could help to achieve these goals, and the purpose of this chapter is to present theoretical background and examples about how to do it.

Digital Inclusion of Adults

Studies show many advantages of including adults in the digital world. Some of the advantages of using information and communication technologies by adults include increased quality of life, decreased feelings of loneliness and depression, increased feelings of independence and personal growth. When adult people's mobility decreases with aging and they experience vision and cognitive impairments, their quality of life is affected negatively. Digital inclusion is regarded as an important opportunity to enhance social network and support that can be achieved through internet. Adult people can utilize many different benefits of internet such as

communicating with friends and families, sharing jokes, pictures and entertaining content, playing online games, learning about medical issues, etc.

However, it is important to know that limited access and low technological knowledge and skills prevent adults from fully benefiting from these opportunities, which makes them digitally excluded. Educators, policy makers, and politicians should understand the needs and limitations of this population if they want to turn digital divide into digital inclusion. Needs of adult people are different from those of the younger generation. No solution can be provided without addressing their unique needs. For instance, simply owning the digital tools and having access does not guarantee actual technology use and adoption. Given that both devices and skills and interest are required for the digital inclusion of adults, this chapter provides information about how to enable digital inclusion, develop skills, which barriers exist, and what basic skills can be instructed to adults.

1.1 Barriers to Digital Inclusion

Digital inclusion is about ensuring that digital technologies are available to everyone. It is also referred as the ability to access and use information and communication technologies.The term refers to the necessary activities to ensure all individuals' and communities' access to and use information and communication technologies (ICTs). Five main elements are included in this term:

1. Affordable and robust internet service
2. Devices that enable internet access in line with the user's needs

3. Access to digital literacy training
4. Technical support
5. Applications and online content to enhance self-sufficiency, participation, and collaboration.

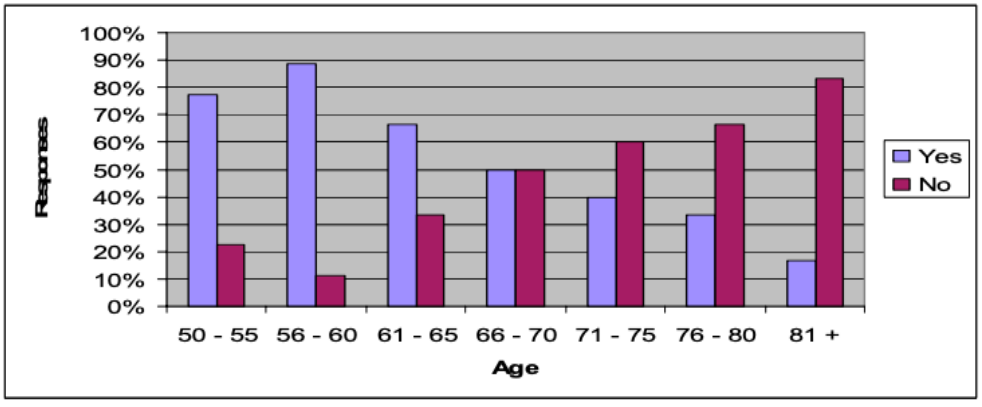
Digital exclusion, on the other hand, refers to the lack of technology resources and access or the inability to make informed or empowered choices concerning the use or non-use of ICT-based practices.

There are important benefits of digital inclusion not only for the person but also for the community as a whole. A digitally inclusive community is of importance for the development of economy and workforce, civic participation, education, health, and safety. Some benefits of digital inclusion could be listed as improved education and employment outcomes, improved health and well-being outcomes (people digitally included have access to more improved health information and services), and access to a wider range of products and services at lower prices.

Digital inclusion contributes to better social outcomes as it helps people to increase their self-confidence, self-efficacy, and resilience. When digital inclusion recognizes and reflects individual needs, there is a higher probability that it can achieve outcomes that are relevant to their lives. On the other hand, there is a powerful link between digital exclusion and various aspects of social exclusion. While digital inclusion helps older adults to have the necessary skills and motivation and enhance their life, digital exclusion could cause social exclusion as well as social and economic problems.

Low-income households, rural populations, minorities, women, and disabled individuals are at the risk of digital exclusion more than others. Due to lower incomes and lack of financial inclusion, lack of affordability can impact disadvantaged groups more.

The figure below indicates the use of internet by different age groups. As it can be seen in the figure, internet use decreases with the increase in age. The number of internet users is higher in the 50-55, 56-60, and 61-65 age groups. However, it is equal or it decreases significantly among older age groups.



A significant proportion of the population is digitally excluded because they lack internet access and/or have low levels of digital literacy.

According to the UK Digital Strategy (2017), the barriers to digital inclusion are as follows:

- **access** - not everyone has the ability to connect to the internet and go online
- **skills** - not everyone has the ability to use the internet and online services
- **confidence** - some people fear online crime, lack trust or don't know where to start online
- **motivation** - not everyone sees why using the internet could be relevant and helpful

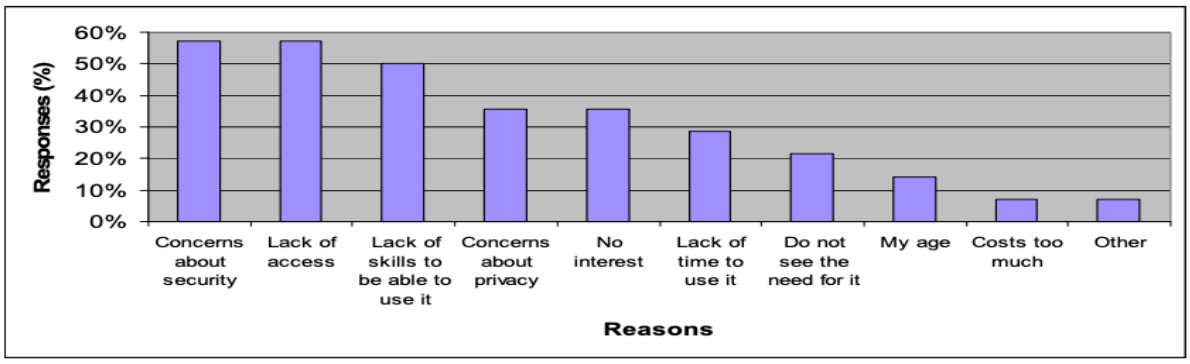
Increasing digital inclusion could first be possible after improving access, skills and confidence. Individuals who do not overcome these barriers are probably not interested in the content, design, and capability of the digital services provided. Therefore, the same report states further barriers as follows:

- **design** - not all digital services and products are accessible and easy to use
- **awareness** - not everyone is aware of digital services and products available to them
- **staff capability and capacity** - not all health and care staff have the skills and knowledge to recommend digital services and products to patients and service users

A study conducted by the Good Things Foundation regarding understanding the motivation of non-users of the internet states four main reasons:

a. **It is not for me:** People who think so do not see the personal benefit in being online. There is no real need or purpose to go online. These kinds of users cannot be sure how internet can add value to their current situation.
b. **There is no support available** : People in this group think that they do not have the right support, which might include access to the support they feel they need or the actual devices required.
c. **It is too complicated**: People in this group lack the basic digital skills and an understanding of how the internet works. This lack of information could include critical skills to judge digital content to protect themselves when using the internet.
d. **It is too expensive**: This barrier is related to the affordability of devices as well as connection costs for running these devices.

Another study reports the reasons for internet use in the figure below. Around half of the participants had concerns about security, had lack of access as well as skills to use internet. Almost half of them were concerned about privacy, or they did not have any interest.



Predictions made by the Good Things Foundation and CEBR indicate that there will be around 6.9 million people who still lack digital skills by 2028. The barriers, in general, will continue to be a) the gap in the basic/digital skills, b) a lack of access to connection and/or devicec, and c) individual motivational barriers that prevent engagement. Following recommendations could be considered to enhance digital inclusion:

- Help people see personal relevance of internet in their lives.
- Allow them to determine what they want to know.
- Provide intensive, tailored support, and an open-ended time commitment for older adults who need more help and guidance.
- Use a nudge approach: raise awareness, acknowledge the fear factor, help them to see that they are not breaking anything while using it.
- Stimulate participation among disengaged groups in general learning activities.
- Show, don't do, and preferably use only one device (for example a tablet) to teach.

There is a need for digitally excluded older people to have compelling reasons to find relevance and value in technology. Identification of the right moment when someone might be interested is very important. Available people should be ready to provide appropriate support at that point.

1.2 Technologies Designed to Promote Digital Inclusion

Digital Tools for Digital Inclusion

This section gives examples of internet sources that provide training on improving digital skills. Various websites on internet provide free, guided, step by step digital learning opportunities for self-learning. Some examples could be listed as follows:

Literacy Online: Literacy Online is an online platform that provides online literacy training. It provides online learning and teaching opportunities for digital literacy as well. The topics listed for enhancing online literacy are listed as follows. The topics listed could be considered a general guide to provide key concepts for such initiation:

- Introduction to Computers
- Internet basics
- Using e-mail
- Internet search
- Microsoft Word

- Finding a Job online
- Resumes
- Maps and Transportation
- Access to Social Services
- Access to health services
- Access to education

https://www.digitallearn.org/: People who are new to computers or feel a little unsure and uncomfortable might need a kind of refresher. The website helps users to tackle technology at their own pace. Adult learners who want to learn basic information about computers and internet resources have an access to the units designed for learning these topics. Some units are as follows: Why Use a Computer? Getting Started on a Computer, Using a PC (Windows 10), Navigating a Website, Intro to Email, Intro to Email 2: Beyond Basics, Basic Search, Using a PC (Windows 7), Using a Mac (OS X), Intro to Searching Videos on Youtube, Introduction to Google Maps, Accounts and Passwords, Online Scams, Internet Privacy, Creating Resumes, Online Job Searching, Applying for Jobs Online, Microsoft Word, Cloud Storage, Creating a Basic Budget with Excel, Online Health Information, Intro to Skype, Intro to Facebook, Using a Mobile Device, and Buying a Plane Ticket.

https://www.generationsonline.com/: The website is designed to teach seniors how to connect others and use the online resources. The training enables older adults to learn basic information about digital literacy even in simplified versions for computers, laptops, tablets, and smartphones.

https://learndigital.withgoogle.com/digitalskills: The website provides an online digital skills training in which the learner progresses at his/her pace. The topics in the training aim to help learners to improve their career. They first choose a skill, learn at their own pace, and receive a certificate. Some main topics are as follows: Seize the digital opportunity, Explore how websites work, Build a strong online strategy, Manage your time effectively, Create a long-term social media plan, Learn how to export and expand your business.

https://www.digitalliteracyassessment.org/: The website assesses the learner's current knowledge about general digital literacy skills. It also provides information on using online resources for daily life and career opportunities. Units for essential computer skills: Basic Computer Skills, Internet Basics, Using Email, Windows, Mac Os. Units for Essential Software Skills: Microsoft Word, Microsoft Excel, Microsoft PowerPoint, and Google Docs. Units for

Technologies in Daily Life: Social Media, Information Literacy, Supporting K-12 Distance Learning, Career Search Skills, and Your Digital Footprint. The website helps learners gain digital skills online, but only some units are open to public access for free.

https://www.futurelearn.com/career-advice/grow-your-digital-skills: The website enables access to free training for improving digital skills from a variety of levels including use of social media, digital skills for work and life, mobile, user experience, etc.

Good Things Foundation (Tablet Skills through Games)**:** This guide is designed for older adults and aims to teach tablet skills through games. The notion is that playing games on a digital device is fun and social and could be used to help older adults to get comfortable with technology. While they are playing games, older adults could gain the skills and confidence of carrying on by themselves. Internet has miscellaneous games from traditional to modern ones, older adults could be encouraged to find and use them. Chess, puzzles, words and numbers games, picture puzzles, sudoku, sports games, etc are some of the examples.

Digital Technologies for Social Inclusion

This section gives detailed information on the technologies promoting digital inclusion for adult learners. Technologies to be utilized is the first step for providing adult learners with necessary skills for learning digital technologies.

A device for accessing internet for digital learning could be listed as follows:

Desktop Computer: Desktop is a physical computer unit that consists of a monitor, CPU, key-board and a mouse. It is a graphical user work space on a software operating system. It is generally large in size.

Laptop: Laptop computers offer the same computing power as a desktop unit but in a lightweight, portable model. It is smaller in size.

Tablets: With their convenience, portability, and easy-to-use features, many people prefer tablets for digital access. Tablet or Tablet Computer is a device generally operated with a mobile operating system. It has the touchscreen display and there is a rechargeable battery inbuilt in it. It is basically a thin and flat device.

Smart Phones: a mobile phone that performs many of the functions of a computer, typically having a touchscreen interface, internet access, and an operating system capable of running downloaded apps.

Smart TVs: A smart TV is different from a normal TV. It can connect to the internet and has multiple built- in apps such as Netflix,Youtube, etc.Smart TVs are becoming more and more popular. Smart **televisions** offer apps, media streaming, web browsing, games and, perhaps most importantly, Internet Protocol **Television** (IPTV).

Tablets and e-books: An electronic book, also known as an e-book or eBook, is a book publication available in digital form. It consists of text, images, or both and readable on the flat-panel display of computers or other electronic devices. Many older adults prefer tablets due to their bigger screens for video conferencing with family, using email, sharing photos and doing Internet research.

While the use of Technologies has climbed among older adults, only around 26% of older adults stated that they felt very confident using computers, smartphones and other electronic devices to do their tasks online. They also reported that they needed help when they set up and learned to use a new device. Those who are used to using desktop computers with a mouse might need time adjusting to touchpad technologies.

GPS: Whether it's a standalone unit or part of a smartphone, GPS is particularly helpful for people who move into or try to find their way a new neighborhood.

Fitness Trackers: They monitor activity and sleep, ensuring that you get enough exercise.

Smart watches: There are smart watches available that include a medication reminder fitness tracker, optional activity sensors for the home and will pair with a cellphone for use away from home.

Geolocation: Geolocation is the identification of the geographic location of a user or computing device via a variety of data collection mechanisms.

How to Choose the Appropriate Digital Resources

The changes in the world with the pandemic have put the use of digital sources and internet in a very important place. As millions of people around the world are staying home as part of measures to stop the pandemic, digital inclusion has been more important than before. There is now more reliance on the internet for communication with family, friends, and colleagues; for education; and even for shops and groceries. Advanced technologies could help to promote digital inclusion and break down barriers.

Here are three essential aspects of Digital Inclusion, which is *access, adoption, and application*. Digitally inclusive communities can be created through these aspects.

- Access: Availability, affordability, design for inclusion, and public access.
- Adoption: Relevance, digital literacy, and safety.
- Application: Economic and workforce development, education, health, public safety and emergency services, social connections, etc.

Including older adults in the digital world requires a practical, policy-driven approach that considers the needs of individuals and communities as a whole. Factors that need to be catered for digital inclusion are as follows:

- Access to internet
- Available Hardware
- Available software
- Digital content and services
- Training for digital literacy skills for effective information and communication technologies.

With advances in technology, digital inclusion must evolve. Therefore, it requires intentional strategies and investments, which indicates reducing and eliminating barriers to access and use technology. Digital age can be fully embraced by addressing and guiding the readiness of communities. When all population including older adults become full participants in this new technology, it will be possible to enrich the lives of individuals and communities. The cost for society will be higher when some segments of some society are digitally excluded.

Particularly during the Covid-19 pandemic, people had to stay at home and thus sought opportunities for online learning programs. Digital inclusion of older adults could be achieved through online learning programs.

Knowles' Six Key Characteristics of Adult Learners should be taken into consideration while choosing a learning content for adult learners.

- The need to know
- A responsible self-concept
- A wealth of life experience
- Readiness to learn
- Orientation to learning
- Intrinsic motivation

Best Practices to Promote an Adult's Readiness to Learn require the following factors:

- Create a safe, welcoming learning environment
- Culture empathy, respect, approachability, authenticity
- Collaborate on the diagnosis of learning needs
- Collaborate on developing learning objectives and in instructional planning
- Ensure the practicality of all learning activities

Various websites (for example: https://www.idealist.org/en/careers/learning-new-technology-after-50) guide learners about how to navigate online to improve their digital literacy skills. They provide general information and suggestions to use internet more effectively.

- Evernote: It keeps tracks of and syncs all your notes across all of your devices. It can be used to collaborate and share data.
- Senior Net: An independent, international, volunteer-based non-profit organization that is one of the world's leading technology educators of adults 55+.
- Silver Surf: This free app for iPhone and iPad features large navigation buttons, allows users to zoom in on text, and makes viewing easier. However, it might not be available in some countries.
- Technology for Seniors Made Easy: This is a Facebook group offering tips and info for working and managing life online.
- Trello: Trello is an online project management app that lets you set deadlines, assign tasks, and have conversations with co-workers. It gives you a simple way to see a project through to completion.

1.3 Digital Skills and Employment

Digital skills are highly important in today's world. According to the results of the Burning Glass report, more than 8 in 10 middle-skill jobs require digital skills. This percentage was 4% less in 2014. Need for better customer and operational side of all businesses. The report also indicates that digitally intensive middle-skill jobs pay more than non-digital ones.

Since the report also highlights that digital skills enable a career pathway into middle and high-skill jobs, providing older adults with online digital learning opportunities is considered to be of

great importance. Digital skills are also considered as door openers and career advancers. New technologies will reshape jobs as automation puts many jobs at risk. While technology creates new types of jobs, it also changes what people do on the job and how they do it. Most occupations that grew in the EU since 2011 are rich in social interactions and require above-average ICT skills.

There are some basic digital skills required for most jobs; namely, employees want their employers to be able to communicate through digital sources for job-related issues. Five basic digital skills required for employment are as follows:

- Using devices and handling information.
- Creating and editing.
- Communicating.
- Transacting.
- Being safe and responsible online.

Foundation Skills

• Turning on a device (including using a password if necessary);

• Using the available controls on a device (depending on the device used, a mouse and keyboard, or touchscreen);

• Making use of assistive technology to make devices easier to use (for example changing display settings to make content easier to read);

• Interacting with the home screen on a device;

• Connecting to the internet (including Wi-Fi) safely and securely, and opening a browser;

• Opening and accessing an application on a device.

The UK Department for Education and other organisations outline these basic digital skills under six areas, which are subdivided into skills for life and additional skills for work. They are listed as follows:

- Digital foundation skills **– the fundamentals of being able to use digital Technologies**:

For example:

- using a browser
- connecting to the internet
- keeping passwords secure

- Communicating

For example*:*

- sending emails securely
- using attachments
- participating on social media.

- Handling information and content

For example*:*

- using search engines
- being aware that not all online content is reliable
- accessing content across devices

- Transacting

For example:

- setting up accounts to use or purchase goods/services online
- using different secure payment methods
- filling in online forms

- Problem-solving

For example:

- finding solutions to problems using FAQs/tutorials/chat, presenting solutions through software
- improving productivity

- Being safe and legal online

For example:

- understanding best practice in data storage/sharing
- updating and keeping passwords secure
- taking precautions against viruses

A lack of digital skills can have a profound effect on people's general life chances and employability. The basic digital skills mentioned above are considered to be enough for many traditional workplaces.

You can list and organize, your digital skills in your Europass profile. You can create a list of all of your digital skills, including tools and software you can use. You can describe the tools you use in your job or studies, as well as the tools you use in your spare-time (e.g. social media, blogging, gaming). Open badges can also better represent your learning achievements than a traditional record (e.g. Europass CV).

Anyone can freely describe their digital competence in 27 languages through the EUROPASS self-assessment tool based on the DigComp framework (see: https://europass.cedefop.europa.eu/en/about). EUROPASS is an EU service that allows jobseekers to showcase their skills and qualifications in formats that can be easily understood across Europe.

1.4 Enabling Access to Digital Technologies

Needs of people and countries vary depending on many factors. With the advances in science and medicine, people now live longer and require various services available for them in public. States have to consider older adults' needs as well, and digitalization is seen as a cost-effective response to aging populations (Genoe et al., 2018).

Various opportunities provided online actually serve the needs of older people as well. For example, the Internet can be used by older adults to work remotely, access entertainment, read newspapers, use and read blogs, make holiday plans, search for health information or topics of interest, etc. Technology also helps older adults to communicate with their friends and family, enjoy games, and learn more about their hobbies. In addition to this, many countries in the world have begun to provide their services online and become web-based. Some examples include banks, tax policies, government services, insurance companies, electronic drug prescriptions, online consultancy and appointment services, etc. When countries provide the services online, they face a great challenge in terms of the differences between generations. Although technologies are considered to be a solution to the demographic challenges, they are not problem free. While the younger generation is ready to do most things online, the older population either does not have the necessary tools for that or lacks the necessary skills to use those tools effectively. People age 65 and over always use Internet and other digital technologies less frequently than younger generations. Despite all the services provided online, if older people lack support networks, use of technology can be hindered. It's not easy for older adults to become familiar with the rapidly developing technology and use it effectively. They surely need help and guidance about safety and effective use of digital technologies. Otherwise, they are most likely to become excluded from the benefits of digital technologies.

Older adults should be instructed to help them make sense of the digitalizing world and take actions to cope with it. Some points to be taken into consideration are as follows :

- They should be introduced technology in ways that are relevant to their own life. Benefits of technology in making life easier like doing shopping, banking, taxing online and not having to wait for these procedures should be explained with examples.
- Such initiation requires choosing the most appropriate device to help them go online and choosing the most helpful applications that they can use. It is important to know that if older adults' declined functional abilities are combined with unsuitable devices, they tend to avoid using digital systems and feel too old to cope with upskilling. Guided assistance should be provided.
- If they cannot benefit from technology and digitalization sufficiently, older adults could have concerns about becoming alienated from society as a whole. That's why they should be taught how to use digital services at a basic level.

Developing Digital Skills

If older adults have a companion from a younger generation, they tend to have increased positive user experiences and views of digitalization. Unfortunately, not all older people have such an opportunity.

Another important point to consider is the heterogeneity of older adults as users of technology. While some older adults are already familiar with technology and have used them at work life, some others lack both the equipment and the necessary skills to use them. Similarly, while some of them are ready to embrace technology and benefit from its advantages, some others may feel too concerned and be resistant to use them fully in their life. These kinds of differences are related to factors such as age, gender, educational background, profession, ethnicity, etc. Hence, development of digital skills in adult population does not have a one-way solution.

Development of digital skills in older adults requires appreciating the encourage and discourage engagement with technology. Not only educators but also policymakers and developers working in technology applications should consider this important point.

Following suggestions could be taken into consideration while helping older adults to develop digital skills:

- In some countries, older adults can perform their daily routines without using technology; however, in some other countries this could be a problematic issue because lack of digital opportunities may prevent adults from using basic services. Teaching older adults how to use digital opportunities to, for example, communicate with service providers may help them feel less concerned.

- Decreased use of digital sources may not always be linked to older adults' digital skills only. Their relationship with technology is actually shaped by their economic, social, and affective resources. Given that the digital divide is not solely associated with older people's ability, these people should be provided with social solutions including making resources available.
- Since rapid changes in technology can be too demanding and seem to be too challenging for older adults, they should be introduced the tools and technology that are appropriate to their age and interests in order to help them master the digitalizing world.
- Some issues at social level should be considered. Preparing some guidelines and regulations on an age-friendly design, for example size of screens and buttons, and intuitive software could be helpful to teach digitalization to older adults.
- It is necessary to know that older adults will need training as well as good and easy access. Sometimes a combination of traditional services alongside newly introduced digitalized services is necessary for the transition period.
- Digitalization aims to close the digital divide, not increase the gap. Considering that not all older adults have the necessary social skills, resources, the initiations improving digital competencies require careful planning.
- If age-related aspects are not handled effectively, digitalization of services will only increase ageism and inequality.
- Although digitalization has the potential to enrich and facilitate everyday lives of older adults, it is also perceived as a threat and deepens equality.

Closing the gap in the digital inclusion in the future is highly associated with how the process of digitalization is managed today. Policymakers and developers as well as researchers and educators should acknowledge and address older adults' needs in the digitalized world and take actions accordingly.

Empowering Digital Citizens

Digital citizens could be described as people who participate in society using information technologies. Longevity has been increasing worldwide, indicating that the older adult population in the world population cannot be left behind. How much older adults are represented in the world of digital technology is questionable because almost all digital technology products and services are produced and marketed by and for mostly younger people.

Digital inclusion of older adults is considered important in terms of many aspects. When they are digitally included, older adults are believed to overcome the feeling of loneliness and helplessness and feel happy because they can have the control of their lives. Research shows that technology-based interventions have the potential to reduce the stress and loneliness among older populations.

More and more services are provided by public and private organizations, and now they are available for older adults as well. In some cases, they need to be actively used by them in financial, governmental, health issues, etc.

Digital citizenship has been given importance in the education systems around the world. It requires educational and technological competence, and access to technology. In addition, digital citizens possess the competences to actively, responsibly and positively engage in online and offline communities (Council of Europe, 2019).

Access to digital resources require a number of essential skills. Users also need to be able to understand how to apply critical thinking in digital spaces. They need to interpret, understand, and express oneself through digital means. Therefore, countries try to build digital citizenship. While including the younger generation into the digital world is being made possible through educational reforms for students and teachers, digital inclusion of older adults cannot be achieved in such an organized and rapid way. A generation of older adults is usually left behind in terms of digital citizenship in many countries of the world.

With the rise of technology use everywhere, developing digital citizenship has been a priority in countries around the world. Having active, engaged and respectful online citizens is essential to fostering digital skill development and inclusion.

It is important to empower older adults to be fully-fledged citizens using internet to maintain their independence, claiming their right to participate in public policy development, communicating with friends and family, or doing business online.

Circumstances caused by the pandemic have made it both necessary and inevitable to do many things in online environments. Being a digital citizen means having access to the internet, a broadband connection, the necessary equipment to connect, and, above all, the skills needed to navigate. In this age of pandemic, the internet helps ensure the continuity of work, education, and social life, so all people must access it. To achieve this, UNESCO suggests recognizing critical barriers to access and the relevance of digital skills and creating standards for digitally inclusive projects.

1.5 Digital Storytelling for Inclusion

Digital Storytelling as Learning and Teaching Methodology

For thousands of years, stories have been used to transmit knowledge, feelings, wisdom, beliefs, and attitudes as well as to construct identities. The ancient art of telling stories is combined with abundant digital sources available, which is referred as digital storytelling.

With its broadest meaning, digital storytelling refers to the use of digital technologies to tell a story. Digital stories are effective because they bring images, music, narrative and voice together to give depth and dimension to be narrative. By using a shared meaning, digital stories enable to create new communities.

Digital storytelling can be utilized in two different ways. Teacher-created digital stories could be used as a good source for making a conceptual content more understandable or to facilitate discussion. Although many educators have become open to the idea of using multimedia in their instruction, many of them lack a cohesive plan. By including images, audio and video elements, digital storytelling could serve as a good opportunity and even make the comprehension of difficult content easier. As an alternative, learners can be encouraged to utilize digital storytelling to research a topic or to choose a particular point of view. Such activity can generate interest, attention and motivation. The skills to be developed in this way include creativity, analysis and synthesis of a content through detailed search, communications skills by learning

to organize their ideas, and critical thinking. Once they share their stories, they can also have gains in emotional intelligence and social learning.

Lammers (2012) summarizes the general features and requirements of digital storytelling in the figure below.

As it is demonstrated in the figure, digital storytelling encompasses multiple literacy skills such as researching, writing, organizing, presenting, problem-solving and assessment; engages students and teachers by enhancing personally meaningful writing; and promotes various 21st century skills such as cultural literacy, information literacy, visual literacy, media literacy etc.

Most research focuses on the use of digital storytelling with children and young adults. However, digital storytelling could be considered as an effective digital inclusion tool for adults as well. Digital storytelling methodology enables adult learners to develop their voices and decide how to represent their identities as well as experiences. The technique allows unheard voices to be heard.

Use of digital storytelling is easy to apply with adult learners. By creating a short video using photos, images, music, and their own voice, participants tell their personal stories or point of views. Use of their own voice is particularly important as it allows them to focus on the personal expression of the maker. It is important to note that the purpose of digital storytelling is not producing literary texts. It rather aims to use language to express feelings and personal experiences. Therefore, digital skills and sources in such activity do not have to be too complicated. Simple and short videos with sounds and pictures with 3-4 minutes length could be used effectively and shared in groups. It can also be turned into a group activity.

A good planning of digital storytelling has the potential to incorporate power, access, diversity, and design. Digital storytelling could be a powerful tool for learners who experience social and digital exclusion. They can be helped to express themselves through new kinds of tools in which they become the authors as well. Producing multi-model texts is also a powerful learning opportunity.

Two main factors that should be taken into consideration include limited technological sources and issues regarding confidentiality, consent, and dissemination. Very personal stories could be shared very in an anonymous way.

Why should Storytelling be utilised?

- Digital stories push learners to create content rather than just consume it.
- It enables us to actively use the 21st century skills of creating, communicating, and collaborating.
- Consuming movies has been part of cultural phenomenon, but making movies has never been this accessible to an average person. Videos and images are actually primary ways of communicating; they are even taking the place of traditional print literacies in some areas.
- Digital storytelling can be done by any person with any level of experience and telling stories or using technology. It allows people to share their stories in creative ways.
- Digital stories create a bridge across content areas and bring opportunities for students to add depth to their work by not limiting themselves only with print literacies.

Great digital stories have some common characteristics. They are personal, they begin with the story/script, they are concise, they use readily-available source materials, they include universal story elements, and they involve collaboration at a variety of levels.

When it is done properly, digital storytelling can be a powerful and emotional way of communicating themes and stories. It is more effective than one-dimensional videos. It reminds people that we all have stories to tell.

Digital Storytelling to Promote 21st Century Skills (4C Skills)

Previously, basic knowledge and skills included a list including English language, reading comprehension, Mathematics, Science, History/Geography, etc. However, these basic knowledge and skills are not adequate to meet the needs of today's employment. Now the workforce requires applied skills such as critical thinking, teamwork/communication, information technology application, creativity/innovation, lifelong learning/self-directed learning etc. Business leaders, politicians, and educators worldwide agree with the idea that "21st-century skills" are very important for success today. The Skills necessary for a 21st Century Education, also called 4C's, include the followings: Creativity, Critical Thinking, Communication, and Collaboration.

Creativity: Although previously creativity was a concept associated with arts, in today's increasingly complex and uncertain nature of the world, creativity has gained more meanings and different levels. These levels include *imitation*; creation by identical replication; *variation*, creation by varying particular aspects and imitating the rest; *combination*, mixture of two or more words into one new work; *transformation*, transformation of an existing work into a different medium or representation; and *original creation*, creation of a new piece of work.

Learners' creativity could be improved through various tasks that will motivate them to produce something new.

Critical Thinking: Critical thinking is a product of education and training and is a mental habit and power. Learners should be trained in it for their welfare. It provides human being with intellectually disciplined processes and requires analysis and synthesis and/or evaluation of information. Adults could be presented with activities that include thought-provoking questions to improve their critical thinking skills.

Communication: All professions require various forms of communication. Some examples could be listed as negotiating, giving instructions, advising, building relationships, resolving conflicts, etc.).Using collaborative tasks to teach and measure communication skills is an important way of enhancing this skill with learners of all ages. Giving learners the tutoring role is another idea, peer tutoring could be utilised as a form of authentic communication. In today's digital age, communication has become more varied. Adult learners should thus be instructed various communication tools as well as media literacy skills.

Collaboration: Problems that we face today are multifaceted. People and agencies that have different skills and problems should collaborate to solve them. A group that collaborates effectively can make better decisions and reach views of multiple perspectives. By giving adult learners a common goal to achieve, collaboration can be encouraged to improve their 21st century skills.

Learning 21st century skills can meet the new demands of contemporary workplaces and paves the way to personal and societal fulfillment in a modern world. There are various ways of teaching adult learners 21st century skills, this unit includes one effective way of doing it: Digital Storytelling, the details of which are presented in the following sections.

The Digital Storytelling production process is as follows:

STEP 1. Decide on the Story You Want to Tell

Do not think big. Keep in mind that you are not creating a literary work. Your story could be a personal journey, transformation in some way, an accomplishment, your hobbies, social commitment, a recovery like overcoming a tragedy, love stories, or uncovering a truth or learning how to do something, etc.

STEP 2: Gather Your Materials

Collecting your memories is a good starting point. Gather old photos, vintage film reels, videos, flyers, etc. Anything that holds emotional resonance works. Using whatever you have is enough. a resolution of at least 1576 high x 1152 wide at 72 dpi (72 dpi is screen resolution) is recommended for the photos.

STEP 3: Begin Writing Your Script

Now, it is time to start jotting down ideas. To create a two to three minute video you will need a script of roughly 250 words. Discussing your ideas with family and friends could be a good idea. Have a rough story in your head. Sketch a script that you will record with your own voice. Creating a story only with images and music is not a good idea. Your personal voice is what makes it different. Also keep in mind that all people find their own voice odd on tape.

- Draft your script. Get personal, your study must be told from your point of view.
- Do not edit as you are writing your script.
- Few words and key images are more effective than long sentences.
- Use plain speech and try to reach an emotional depth.
- Like all stories, have a beginning, middle, and end.

The beginning tells the premise of your story: it sets up the dramatic tension that should hold throughout the story. The middle outlines conflicts along the way. The end is the destination, revealing a small discovery, revelation, or insight. This is sometimes called the desire-action-realisation model. (But not by anyone we know!) Will the guy get the girl? Will the hero prevail? Will the sleuth solve the mystery? With a three-minute script, you don't have time to indulge detours.

STEP: 4 Prepare Your Equipment

The professional you want to be, the more equipment you need to have. They can range from a recording device, portable digital recorder, microhome to headphones. Some of them are optional; however, you will need to have the following equipment;

- A desktop computer or a laptop
- A video software **(some examples: A**pple iMovie, Adobe Final Cut Pro, Adobe Premiere

STEP 5: Create a Storyboard

Storyboards have been used by professionals for decades. It is where you will plot out your visual materials to make them align with your voice-over. While some people prefer putting images first before beginning the script, some others prefer a different order. A story board plans out a visual story on two levels: What happens in what order? And how does the voiceover and music work with the images and video?

Some rules of thumb: Use No more than 15 images for a two-minute video. Put an image on the screen for four to six seconds. Few images are usually adequate to convey a story.

STEP 6: Digitize Your Media

It is better to use photos and voices in high quality formats, which may require extra software or equipment. If you are using old photos for instance, you need to use them in a digital environment in JPEG format with high quality.

STEP 7: Record a Voice-Over

Usually the microphone built into your device will suffice; however, there are more professional options available. Speak slowly in a conversational voice. Don't make it sound like you're reading from a script. Try to choose a place free from outside noises and keep in mind that small rooms might cause echo, so larger rooms with curtains or panels or carpet on the wall could be better.

STEP 8: Add Music

The music you choose should evoke the rhythm and pace of your story. Instrumental music like classical, ambient, folk or jazz with no vocals could be effective. Watch copyright issues. Google helps you find podsafe video and audio.

STEP 9: Edit Your Story

Quality DST could be produced through various free editing software available online. These sources are demonstrated in the table below. One general characteristic of all video editing programs is the timeline used to generate video; the images, video and audio are put in the timeline so that they can be combined in various ways. Import the materials to the program. Bring them into the timeline and match the layout. Use the draft version for the overview of your project. Add the title of the story. If you want to overlay a text on an image, choose a straightforward typeface that is easy to read. Add transitions, cross-dissolve, visual interest to an image, panning across and coming into a photo, etc. Add music as the last element.

App	OS	Price	Link
Animoto	Web	Free for video of 30s / 30$ per year	https://animoto.com/
WeVideo	Web	Free trial / From 4,99 to 29.99$ per month	https://www.wevideo.com/
Moovly	Web	Free for YouTube or Vimeo publishing	https://www.moovly.com/
Powtoon	Web	Free up to 3min	https://www.powtoon.com/home/?

STEP 10: Share Your Story

You can share it in a blog or destination site such as Ourmedia. If you want to share with a few friends or family, choose a peer-to-peer network.

http://digitalstorytelling.coe.uh.edu/example_stories.cfm: This website includes examples of different storytelling activities prepared by students.

http://digitalstoryhub.org/**:** The website includes examples of various storytelling videos from a variety of topics. It shares a quote from Muriel Rukeyser on the main page: The universe is not made of atoms; it's made of tiny stories.

The modern workforce requires 21st century skills, so any curriculum should enable learners to gain competence in skills. One of the ways of improving learners' 21st century skills include digital storytelling. Some benefits of the methods are as follows:

- It empowers learners to be confident in communication.
- It helps them to become creators of media.
- It enables them to reach deeper understanding in all areas of the curriculum.
- It combines the old storytelling tradition with new technology.

When they work on digital storytelling, learners internalize information and realize that their projects have an impact outside the classroom. Other people hear the voice of the story teller.

Watch the video and think about how technology promotes the solicitation of 4Cs in the creation of storytelling activities.
https://www.ted.com/talks/joe_sabia_the_technology_of_storytelling

Sites and Apps available for Digital Storytelling

Animaker Class - It is a useful website to create animated stories. Learners can use the drag-and-drop tool as well as other features such as group management to create stories about any topics.

Book Creator - The mobile app enables to put together eBooks and digital stories with text, audio, images, and video. The site helps to combine text, images, audio and video to create interactive stories, digital portfolios, research journals, science reports, comic adventures, etc.

Cloud Stop Motion - It is a powerful stop motion animation package that runs in the browser and is used for digital story telling on any device.

HeadUP - Allows to create beautiful-looking stories in various subject areas. The website also includes many digital stories on various topics.

Tellagami - The website allows to tell a short story by building an avatar and then recording audio.

Plotagon - Plotagon is an award-winning storytelling tool for all ages. With this app, users can choose a scene, create their own actors, write their story, and let Plotagon make it come to life. They can also save and share their story.

Speech Journal - An iPad app that pairs recorded audio with a digital picture from a user's iPhoto library to create a story.

Additional Resources

• What is digital inclusion?: https://www.youtube.com/watch?v=ALvIYIC1IqE
• What is Digital Inclusion?: https://www.youtube.com/watch?v=zJ51cfrB4Wk
• Martha Lane Fox talks digital inclusion: https://www.youtube.com/watch?v=JsZXEH6Y70I
• A Ted Talk about an older adult's using digital inclusion and barriers to digital inclusion: https://www.youtube.com/watch?v=rSWbgNAgAE8
• A Ted Talk about an older adult's digital divide experiences: https://www.youtube.com/watch?v=fzokRz1pgb0
• Animoto Tutorial: https://www.youtube.com/watch?v=idhv6NMGaCc&t=3s
• The 7 Elements of Storytelling: http://digitalstorytelling.coe.uh.edu/archive/7elements.html
• OER: Digital Skills&Competences for Adult Learners https://epale.ec.europa.eu/en/blog/oer-digital-skills-competences-adult-learners
• Literacy Online: https://sites.google.com/site/literacyonline/volunteering/volunteer-roles/tutors/general-tutoring-information

Module 2. Basic Concepts of Online Search

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Learning Objectives

The main learning objective of this module is to provide learners with the basic concepts of online search. Preliminary, it is illustrated how the internet works, then the problems of full text research and the search functions of Google are discussed.

Upon completion of this Learning Unit, trainees will be able to:

- master basic and advanced internet searches
- know the use of Booleans operators to formulating their queries
- retrieve information items using full text query
- refine the results of a query

Basic Concepts (Key Words)

- Internet Stages
- Web 1.0
- Web 2.0
- Web 3.0
- Web 4.0
- Internet Browsers
- Internet Search Engines
- Search on the Internet
- Search on Google
- Internet Advanced Search
- Boolean Search
- Online Search Strategies
- Tips for Internet Search

Preliminary Notes

The history of the internet began in the 1960s as a US-army-funded research project, then evolved into a public infrastructure in the 1980s with the support of many public universities and private companies.

The various technologies that support the internet have evolved over time, but the way it works hasn't changed that much. From its origin to today, the internet is a way to connect computers all together and ensure that, whatever happens, they find a way to stay connected.

The internet is a worldwide computer network that transmits a variety of data and media across interconnected devices. It works by using a packet routing network that follows Internet Protocol (IP) and Transport Control Protocol (TCP).

Figure 1 shows the difference between centralized systems, decentralized systems, and networking systems.

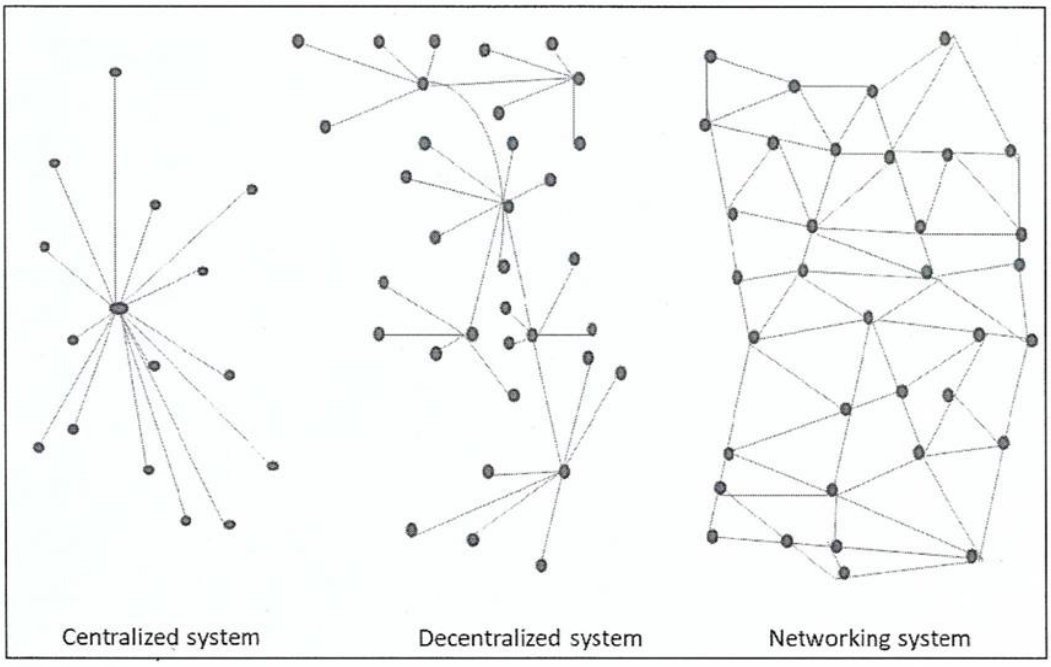


Figure 1. **The three basic computing architectures**

The Internet is a global computer network for communication – actually nothing more than a basic computer network. The Internet simply moves data from one place to another, so that we can chat, browse and share.

Data moves over the Internet in a manner called “packet switching.” What packet switching basically does is send your data in separate pieces – each tagged with your intended destination. Once all of the pieces reach their target, they are reassembled into – voila! – your email. Packets flow by many routes, each determined by the quickest and most efficient at the time you send your email.

If you had a permanent connection to the intended destination or if your email traveled as a whole instead of in pieces, an entire portion of the network would be blocked every time you sent a message. With packet switching, many people can use the Internet at the same time.

There are millions upon millions of servers on the Internet. Servers store information. There are file servers, mail servers and web servers. The Internet is also made up of routers. Routers simply make connections between different systems. For instance, at work or school, where several computers are networked, you are connected to one router – a single point of entry for the Internet.

2.1 How the Internet Works?

Introduction

The following paragraphs illustrate the main concepts related to the internet environment. This part represents the logical and essential premise to the online search.

The Stages of the Internet

In the last few years, the nature of the internet has passed from stationary connection to always-on connections, and young people represent the leading edge of mobile connectivity.

From its creation by Tim Berners-Lee in late 1989, the internet has evolved through four main stages (Choudhury, 2014), namely the Web of documents (Web 1.0), the Web of people (Web 2.0), the Web of data (Web 3.0), and, now, the Web of things (Web 4.0).

The main comparative differences between Web 1.0, Web 2.0, Web 3.0, and Web 4.0 are shown in Table 1.

Web 1.0	Web 2.0	Web 3.0	Web 4.0
1996-2004	2002-2016	2006+	2014+
Read Only	Read and Write Web	Executable Web	Interoperating Web
Links	User participation and Interaction	Understanding contents	Full connections
Websites	Social networks	Semantic web	Internet of things
One Directional	Bi-Directional	Multi-user Virtual environment	Multi-layer real-virtual environment
Static content	Dynamic content	Intelligent analysis	Intelligent actions

Table 1. **The main characteristics of the different stages of the Web**

The Web 1.0 or "read-only-web" was a passive, static, and unidirectional means to access content. It was characterized by a strong separation between information providers and users, considered as merely passive information receivers.

The Web 2.0 introduced interaction among users and between users and content. It was characterized by social networking sites. The web was quickly populated by a plethora of social platforms (e.g., Facebook, Twitter, YouTube, Instagram, etc.) which empowered common users, enabling them to create, up-load, or review content.

The Web 3.0, also known as the semantic web, was characterized by the exploitation of mark-up languages, such as the Resource Definition Framework (RDF), to make data readable by a program.

Web 4.0 was based on wireless communication (mobile devices or computers) connecting people and objects as well as integrating the physical and virtual worlds in real time. For example, autonomous cars combine sensors and software to control, navigate, and drive vehicles, with companies such as Google, Uber, Tesla, and Nissan developing self-driving technologies. In particular, Google developed a prototype that integrates lasers, radar, high-powered cameras, and sonar.

Recently, the latest web evolution is represented by the Web 5.0. Although it is an idea that still lacks precise definition, it is seen as being an evolution that will make the web emotive. Its core idea is that machines would be able to read web contents and react to them, autonomously deciding the action to execute. Using headphones, users can interact with content that responds to their emotions or change the facial expression of their avatars in real time.

The internet continues to grow exponentially, and massive quantities of data are increasingly available (Hewson & Stewart, 2016). Recently, Artificial Intelligence solutions and Big Data tools are introducing new opportunities to overcome the limitations of the traditional web-based applications (Fan & Bifet, 2013; Wu, Zhu, Wu & Ding, 2014).

Nowadays, the continuous progress of technology is evident in every field, since digital technologies encompass economics, politics, and human interactions all around the world.

Web 2.0

The most evident Web revolution started with Web 2.0.

The most significant differences between Web 2.0 and the traditional World Wide Web is greater collaboration among Internet users, content providers and enterprises.

Another major difference between Web 2.0 and the original, static Web is its social nature.

Elements of Web 2.0

- Wikis: Websites that enable users to contribute, collaborate and edit site content. Wikipedia is one of the oldest and best-known wiki-based sites.
- The increasing prevalence of Software as a Service (SaaS), web apps and cloud computing rather than locally-installed programs and services.
- Mobile computing, also known as nomadicity, the trend toward users connecting from wherever they may be. That trend is enabled by the proliferation of smartphones, tablets and other mobile devices in conjunction with readily accessible Wi-Fi networks.
- Mash-ups: Web pages or applications that integrate complementary elements from two or more sources.
- Social networking: The practice of expanding the number of one's business and/or social contacts by making connections through individuals.
- Collaborative efforts based on the ability to reach large numbers of participants and their collective resources, such as cro Social networking: The practice of expanding the

number of one's business and/or social contacts by making connections through individuals.

- Collaborative efforts based on the ability to reach large numbers of participants and their collective resources, such as crowdsourcing, crowdfunding and crowdsource testing.
- User-generated content (UGC): Writing, images, audio and video content -- among other possibilities -- made freely available online by the individuals who create it.
- Unified communications (UC): The integration of multiple forms of call and multimedia/cross-media message-management functions controlled by an individual user for both business and social purposes.
- Social curation: The collaborative sharing of content organized around one or more particular themes or topics.

The creator of the World Wide Web, Tim Berners-Lee, suggests that the Web as a whole can be designed more intelligently to be more intuitive about how to serve a user's needs. Berners-Lee observes that although search engines index much of the Web's content, they have little ability to select the pages that a user really wants or needs. He suggests developers and authors, singly or in collaboration, can use self-descriptions or similar techniques so that new context-aware programs can better classify the information that might be relevant to a user.

Internet Browsers and Search Engines

A browser is software that is used to access the internet. A browser lets you visit websites and do activities within them like login, view multimedia, link from one site to another, visit one page from another, print, send and receive email, among many other activities.

The most common browser software titles on the market are: Microsoft Internet Explorer, Google's Chrome, Mozilla Firefox, Apple's Safari, and Opera. Browser availability depends on the operating system your computer is using (for example: Microsoft Windows, Linux, Ubuntu, Mac OS, among others).

When you type a web page address such as www.amazon.co into your browser, that web page in its entirety is not actually stored on a server ready and waiting to be delivered. In fact each web page that you request is individually created in response to your request.

A web browser takes you anywhere on the internet. It retrieves information from other parts of the web and displays it on your desktop or mobile device. The information is transferred using

the Hypertext Transfer Protocol, which defines how text, images and video are transmitted on the web. This information needs to be shared and displayed in a consistent format so that people using any browser, anywhere in the world can see the information.

Websites save information about users in files called cookies. They are saved on your computer for the next time you visit that site. Upon your return, the website code will read that file to see that it's you. For example, when you go to a website and the page remembers your username and password – that's made possible by a cookie.

There are also cookies that remember more detailed information about you. Perhaps your interests, your web browsing patterns, etc. This means that a site can provide you more targeted content – often in the form of ads. There are types of cookies, called *third-party* cookies, that come from sites you're not even visiting at the time and can track you from site to site to gather information about you, which is sometimes sold to other companies. Sometimes you can block these kinds of cookies, though not all browsers allow you to.

A browser allows your access to the internet, but a search engine allows you to search the internet once you have access. You have to use a browser to get to a search engine. Google, Bing, and Yahoo are search engines.

The difference between webpage, website, web server, and search engine

Here following the definition of webpage, website, web server, and search engine.

- A webpage is a document that can be displayed using a web browser such as Firefox, Google Chrome, Opera, or Microsoft Internet Explorer Safari. These are also often called just "pages."
- A website is a collection of web pages that are grouped together and usually connected together in various ways. Often called a "web site" or simply a "site."
- A web server is a computer that hosts a website on the Internet.
- A search engine is a web service that helps you find web pages, such as Google, Bing, or Yahoo. Search engines are normally accessed through a web browser (e.g. you can perform search engine searches directly in the address bar of Firefox, Chrome, etc.) or through a web page (e.g. bing.com or duckduckgo.com).

Let's look at a simple analogy — a public library. This is what you would generally do when visiting a library:

Find a search index and look for the title of the book you want.

Make a note of the catalog number of the book.

Go to the particular section containing the book, find the right catalog number, and get the book.

Let's compare the library with a web server:

The library is like a web server. It has several sections, which is similar to a web server hosting multiple websites.

The different sections (science, math, history, etc.) in the library are like websites. Each section is like a unique website (two sections do not contain the same books).

The books in each section are like webpages. One website may have several webpages, e.g., the Science section (the website) will have books on heat, sound, thermodynamics, statics, etc. (the webpages). Webpages can each be found at a unique location (URL).

The search index is like the search engine. Each book has its own unique location in the library (two books cannot be kept at the same place) which is specified by the catalog number.

2.2 Simple Search on the Internet

Introduction

It is largely shared by the idea that natural language queries are the best means for searching information online.

Most users on the Internet enter one or two search terms, sometimes a phrase, that in their intention describe what information they are looking for. The norm is to refine the search on the basis of the first page results. The query is reformulated with terms that appear more appropriate. This is an iterative process.

Of course, multimedia items present an additional level of complexity in search specification.

However, using the browser option image, one can visualize the query results as images; this is very useful in order to obtain the visual correspondence of a term and verify its real meaning, especially if the query is formulated in a foreign language.

Simple Search

The simple search allows for keyword searching.

One can limit a search using a few words or a particular phrase by putting the phrase in quotation marks (e.g. “climate changes”).

One can also use AND, OR, NOT operators (e.g., best seaside places AND Italy).

Generally, one uses words to search on the web.

Note that:

- Google Search usually ignores punctuation that isn’t part of a search operator.
- Don’t put spaces between the symbol or word and your search term. put spacesA search for site:nytimes.com will work, but site: nytimes.com won’t.

How to Search on Google

The common use of Google for searching on the internet is limited to typing words (search terms) that represent what is searching for.

The query search terms are changed until it is found what is looking for.

Common search techniques:

1. Search social media. Put **@** in front of a word to search social media. For example: **@twitter**.
2. Search for a price. Put **$** in front of a number. For example: **camera $400**.
3. Search hashtags. Put **#** in front of a word. For example: **#throwbackthursday**.
4. Exclude words from your search. Put **-** in front of a word you want to leave out. For example, **jaguar speed –car**.
5. Search for an exact match. Put a word or phrase inside quotes. For example, **"tallest building"**.
6. Search within a range of numbers. Put **..** between two numbers. For example, **camera $50..$100**.
7. Combine searches. Put "**OR**" between each search query. For example, **marathon OR race**.

8. Search for a specific site. Put "**site:**" in front of a site or domain. For example, **site:youtube.com** or **site:.gov**.
9. Search for related sites. Put "**related:**" in front of a web address you already know. For example, **related:time.com**.

Refining a query means changing or adding to the set of search terms to do a better job of returning the pages you're seeking. Successful researchers frequently enter several queries to find what they're seeking.

The search boxes at the top and bottom of the results page show the query for the current results page. If the query uses special operators that you entered either directly or indirectly through the advanced search form, they will appear in the search box as well. To refine your query, edit what's in the search box and then click the Google Search button or hit the **ENTER** key.

Let's look at a few examples.

- Get ideas for subsequent searches by reviewing your results, including the snippets that Google returns and the pages they came from.
    1. Should you get a flu shot this winter?
        - TRY [flu shot]
    2. Many of the results refer to influenza vaccine.
        - REFINE [flu OR influenza shot OR vaccine]
- Exploit successful queries: look deeper within your results.

Scroll to the search box at the bottom of your results page and click on the link "Search within results." This causes Google to run a new search using your newly specified terms (those in the search box) *only* on the pages it found from your initial query, rather than a search over the entire web.

Google Guide is an online interactive tutorial and reference for experienced users, novices, and everyone in between. It has been developed by Nancy Blachman. Google Guide is neither affiliated with nor endorsed by Google.

Google Maps for Mobile (GMM)

Traditional directory assistance applications are limited to a single modality,using voice as both input and output. With the advent of smartphones with large screens and data connectivity, we

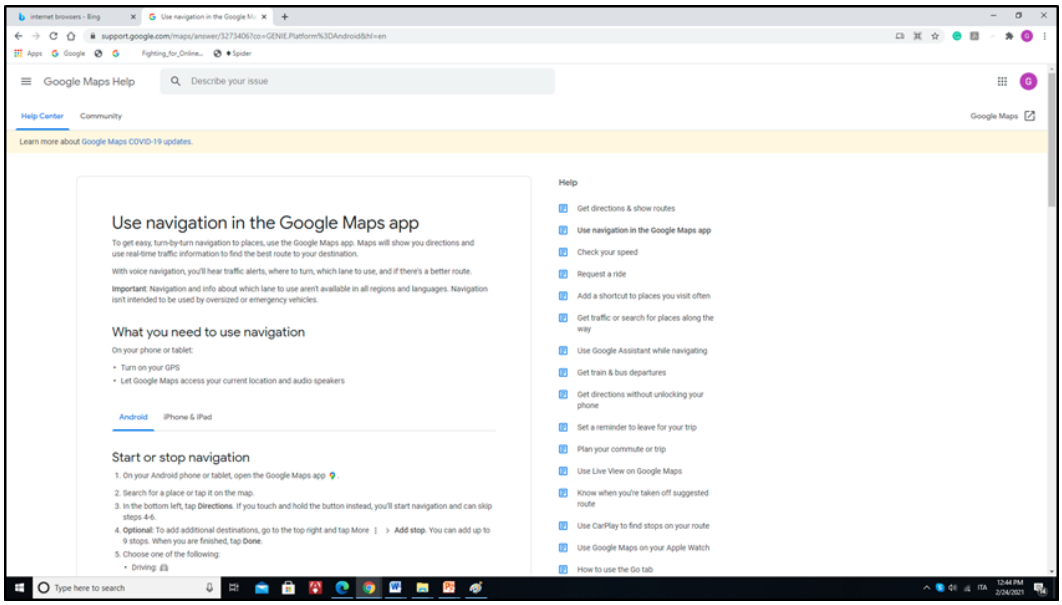
could move to a multi-modal user interface with speech or text as the input modality, and maps with super-imposed business listings as the output modality.

To use GMM on your phone or tablet:

- Turn on your GPS
- Let Google Maps access your current location and audio speakers

You can find the instruction to navigate at:

https://support.google.com/maps/answer/3273406?co=GENIE.Platform%3DAndroid&hl=en



A problem in full text searching: polysemous words

Natural language suffers from word ambiguities, such as **polysemy**.

When a symbol, word, or phrase means many different things, that's called polysemy. The verb "get" is a good example of polysemy — it can mean "procure," "become," or "understand."

One can find the explanation of Polysemy at https://www.vocabulary.com/dictionary/polysemy

One of the concepts used by linguists (people who study the way languages work) is *polysemy* — it's an ambiguous quality that many words and phrases in English share. Generally, polysemy is distinguished from simple homonyms (where words sound alike but have different meanings) by etymology. Polysemous words almost always share the same origin or root. Speaking of etymology, polysemy comes from Greek, in which it means "of many senses."

Disambiguation techniques exist but introduce system overhead in processing power and are often context sensitive.

To solve the polysemy and other problems related to natural language, you can use Google BERT. It is a Google update powered by artificial Intelligence that has big implications for marketers.

BERT stands for *Bidirectional Encoder Representations from Transformers*. But you don't need to understand all the AI behind BERT to understand its impact.

All BERT does is help Google better understand the context around your searches.

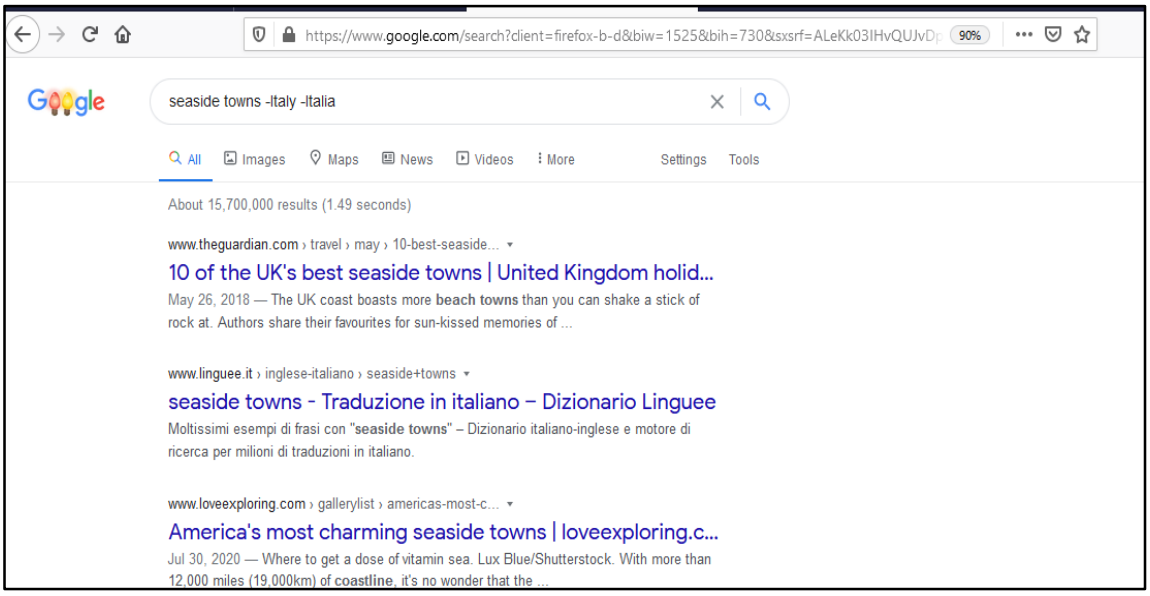
It uses sophisticated AI to process every word in a search in relation to all the other words in a sentence. In the past, Google used to process words one-by-one in order.

2.3 Advanced Search on the Internet

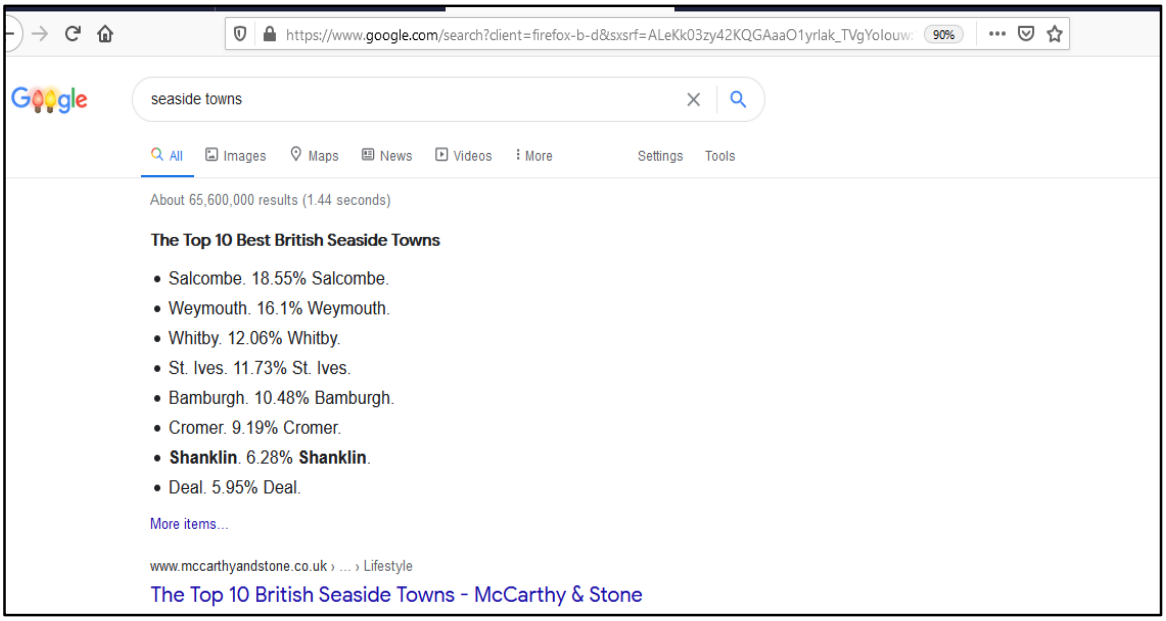
Introduction

An advanced search on the internet can use the Boolean operators to make more precise the query.

For example, one would like to search for *seasides towns* but wouldn't like to include *Italian towns*:



The query that don’t exclude the Italian seaside towns recall more results:



Boolean Search

Boolean search is a search performed using the Boolean operators "AND," "OR," and "NOT."

The term Boolean comes from the name of the scholar George Boole who introduced the Boolean logic (*The Laws of Thought*,1854).

A good way to illustrate how boolean logic works is through a Venn diagram. The circles in a Venn diagram illustrate different sets and the shaded areas show how the boolean terms form relationships between the sets.

Figure 2 shows the Venn diagram for the operator OR

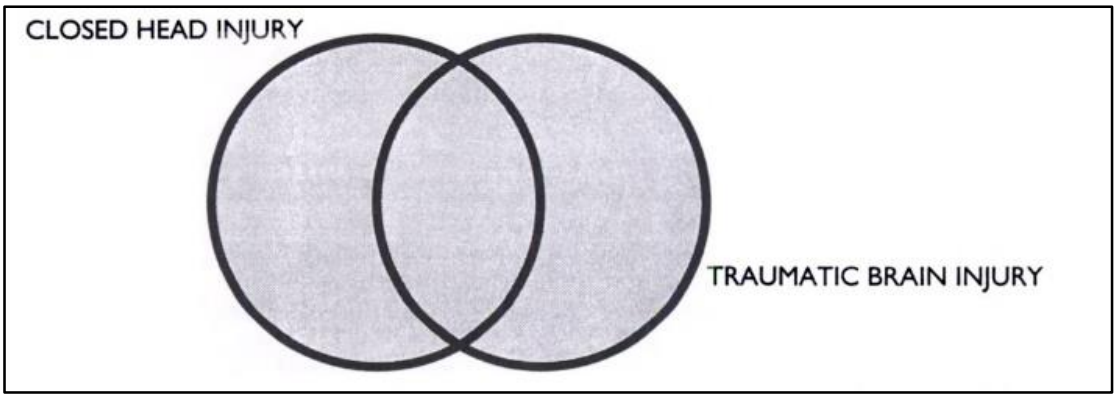


Figure 2. **Venn diagram for the operator OR**

Figure 3 shows the Venn diagram for the operator AND

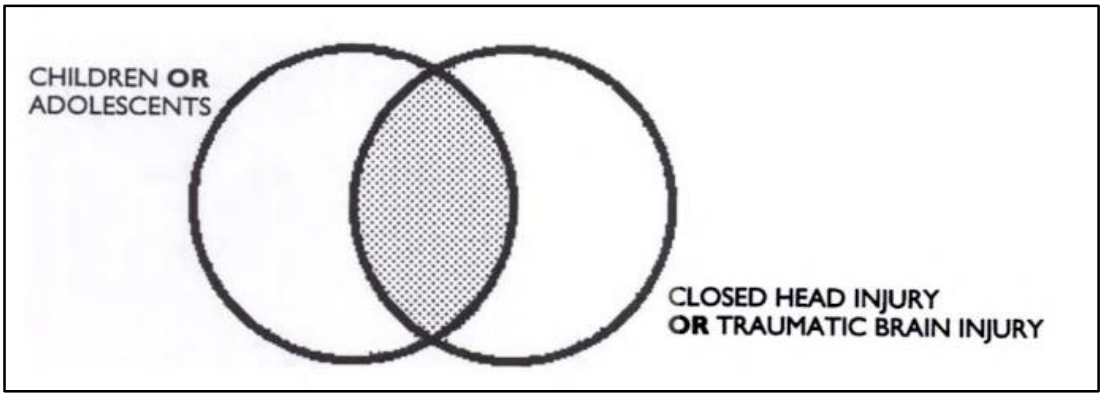


Figure 3. **Venn diagram for the operator AND**

Figure 4 shows the Venn diagram for the operator NOT

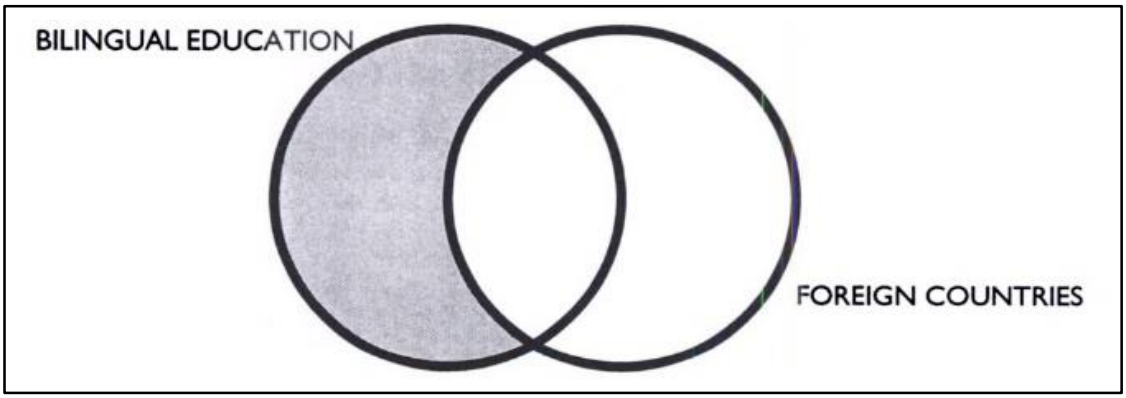


Figure 4. **Venn diagram for the operator NOT**

The order of operations can change the meaning of the query.

Thus, a statement such as

(ORATORIO OR OPERA) AND HANDEL

would be different from

ORATORIO OR OPERA AND HANDEL

In the first query, the terms *oratorio* OR *opera* are searched first then the result is ANDed with the documents that contain the term *Handel* (Figure 5).

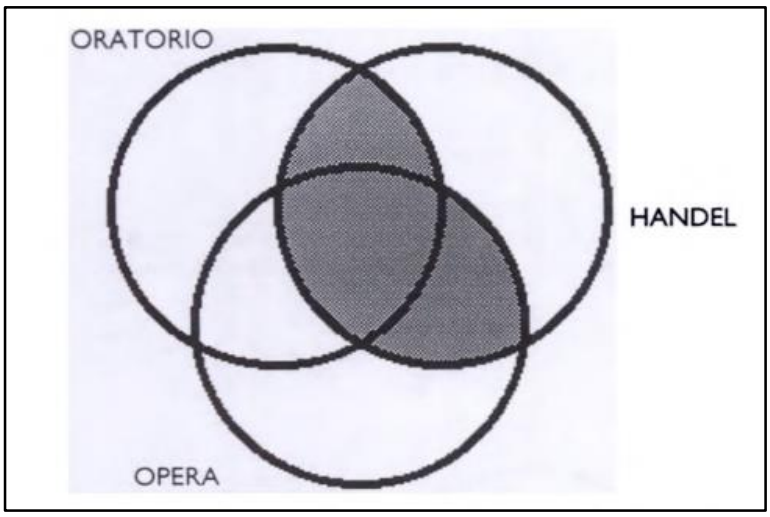


Figure 5. **The Venn diagram representation of the query (oratorio OR opera) AND Handel**

In the second query, there are not parenthesis and, accordingly, the AND goes first (Figure 6).

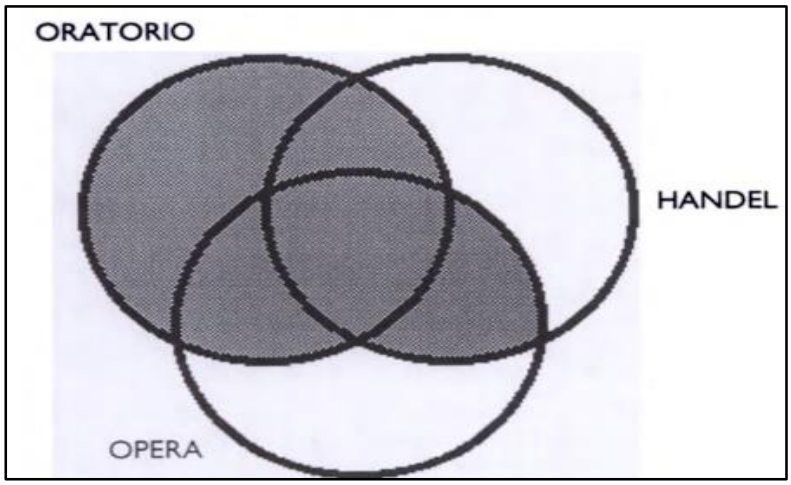


Figure 6. **The Venn diagram of the query *oratorio* OR *opera* AND *Handel***

You can enclose search terms and their operators in parentheses to specify the order in which they are interpreted. Information *within* parentheses is read *first*, then information outside parentheses is read *next*. For example, (mouse OR rat) AND trap, the search engine retrieves results containing the word mouse or the word rat together with the word trap in the fields searched by default.

How to Choose the Right Keyword for an Effective Search

It is a largely shared idea that natural language queries are the best means for searching information online. The internet users enter one or a few keywords, or a phrase in search engines. The process is iterative in nature. The search gets refined based on the results displayed on the first page. The keywords then get reformulated and modified because of the terms that are most relevant to the query.

An extra layer of intricacy is presented by multimedia items in search specification. However, using the browser options image or video, one can visualise the query results as accordingly; this is very useful for obtaining the visual correspondence of a term and verifying its real meaning.

Choosing the appropriate keywords for a search is not an easy matter.

But the primary challenge associated with information retrieval is that the search request formulated by a user may not correspond to the representation of the stored information. Simply put, the way a piece of information is presented by the item's author and the way a user formulates what data is being searched for are two entirely different things.

There are obstacles “that come from the user ability to express what information is needed” (Kowalski, 2011) as well as ambiguity inherent to the natural language. For instance, a particular concept may be presented in more than one way (e. g. car versus automobile).

Although author **and user share the same basic vocabulary, in some cases the vocabulary used for expressing the** same concept by the two can be different, as shown in the figure here.

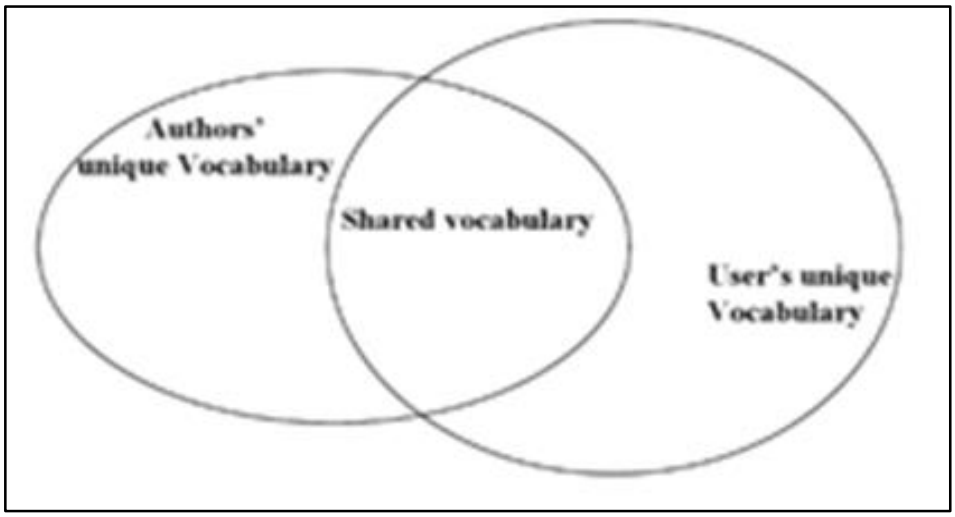


Figure 7. **Difference in author and user vocabulary**

Text Retrieval Measures (Advanced Topic)

The accuracy and precision of a system needs to be vigilantly checked upon retrieval of content based on the user’s input. This Venn diagram represents relationship between two sets of documents where {Relevant} is a data set pertinent to a respective query, whilst an obtained data set is represented by {Retrieved}. Accordingly, the collection of documents that is both retrieved and relevant is given as {Retrieved} ∩ {Relevant}.

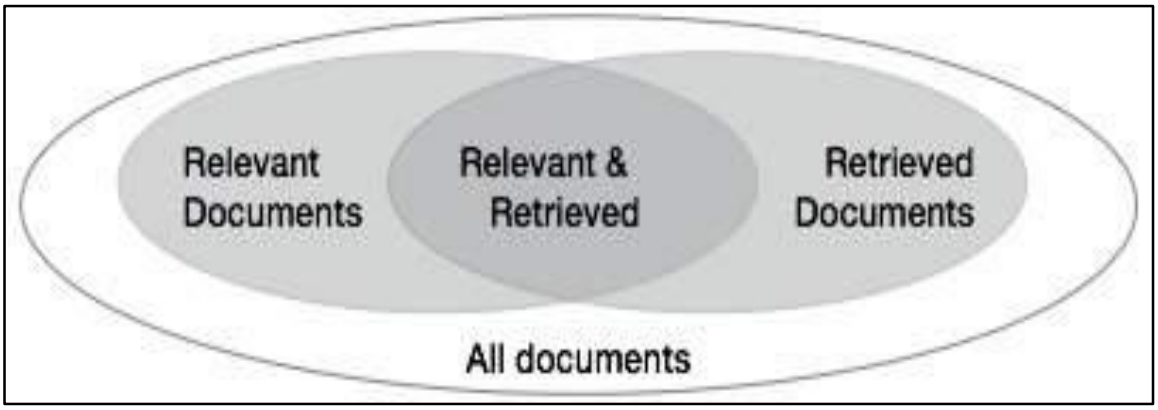


Figure 8. **Relationship between relevant and retrieved documents.**

(Adapted from https://www.tutorialspoint.com/data_mining/dm_mining_text_data.htm)

Quality of text retrieval is assessed on the basis of following standards:

- Precision
- Recall
- F-score.

Precision and recall are two numbers which together are used to evaluate the performance of classification or information retrieval systems.

Precision is defined as the fraction of relevant instances among all retrieved instances.

Recall, sometimes referred to as 'sensitivity, is the fraction of retrieved instances among all relevant instances. A perfect classifier has precision and recall both equal to 1.

It is often possible to calibrate the number of results returned by a model and improve precision at the expense of recall, or vice versa.

Precision and recall should always be reported together. Precision and recall are sometimes combined together into the F-score, if a single numerical measurement of a system's performance is required.

Precision

Precision is the retrieved data percentage that is in relevance to a particular query. It is given as shown here.

$$\text{Precision} = |\{\text{Relevant}\} \cap \{\text{Retrieved}\}| \,/\, |\{\text{Retrieved}\}|$$

Recall

Recall is the documents proportion relevant to a query and obtained by the system. Recall may also be represented as shown here.

$$\text{Recall} = |\{\text{Relevant}\} \cap \{\text{Retrieved}\}| \,/\, |\{\text{Relevant}\}|$$

F-score

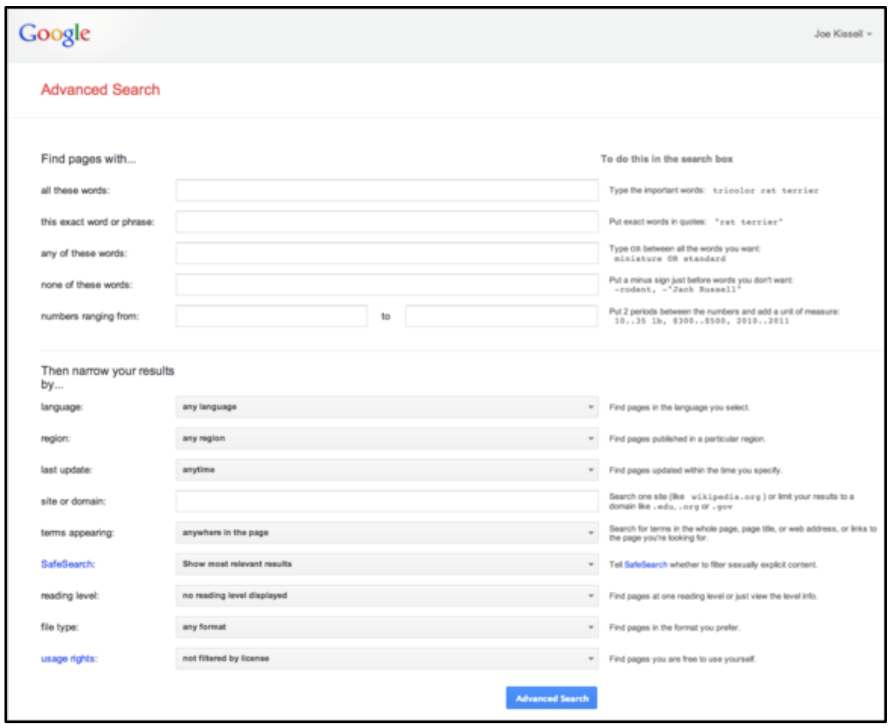
F-score is a trade-off between IRS and precision is defined as F-score. Mathematically, F-score can be formulated as the harmonic mean of precision or recall and may be represented as shown here.

$$\text{F-score} = \text{recall} \times \text{precision} \,/\, (\text{recall} + \text{precision}) \,/\, 2$$

Some Web Search Tips

There are some useful tips for an effective Web search:

- Search for a phrase. To search for an exact, complete phrase and not just its constituent words, put it in quotation marks. For example, instead of typing at sunrise on my birthday type ”at sunrise on my birthday”. The number of hits will shrink dramatically, as you’ll see only pages that include that exact phrase.
- Be more specific. If you want to find articles about managing bookmarks in Safari on an iPhone running iOS 7, don’t search for just manage bookmarks. Throw all those terms in: manage bookmarks safari iphone ios 7. The more information you provide, the more useful your results are likely to be.
- Exclude a word. To make sure your search for information on the connector your iPhone uses doesn’t return matches about an atmospheric phenomenon or a fictional race car, put a hyphen (-) in front of terms that should disqualify a page from appearing in Google’s results—for example, lightning -thunder -storm -McQueen.
- Try an advanced search. If you want much more control over your searches, such as specifying which geographic regions to search in, how recently created a page should be, or the page’s reading level, go to Google’s Advanced Search page or, after performing a basic search, click the gear icon in the upper-right corner of the results page and choose *Advanced Search* from the pop-up menu.



Social Search Engines

There are some powerful Search Engines for Social Networks.

If you are looking for a long-lost friend or an ex-colleague, you need a way to search social networks.

Most social networks have their own search engines built in, but they're fundamentally limited by the fact they can only search their own database. And how are you supposed to know whether *Aunt Mary* is on Facebook, Twitter, or one of the other myriad options?

The solution is to use a network-agnostic social search engine. They can search all of the most common networks, as well as lots of the niche, smaller ones.

Here you are some of the most known network-agnostic social search engines.

1. Mentionlytics. It is a great social media search engine for businesses that need to discover trending topics across a number of platforms. You will be able to dig into data about your brand, the keywords you want to target, and your competitors. After performing a search, you will be able to get a complete breakdown of your top influencers, your mentions, and the wider industry social media data. The main clients Mentionlytics is targeting are startups, SMEs, enterprises, public figures, and PR agencies. This is not a social media search engine for personal use. This product is not for free.

2. Social Mention. Social Mention is both a social search engine and a way to aggregate user-generated content across a number of networks into a single feed. It helps you search for phrases, events, and mentions, but it won't let you find individual people. The site supports more than 100 social networks, including Twitter, Facebook, YouTube, and Instagram. It can also scan blogs, bookmarks, and even comments. In the left-hand panel of the results page, you'll see an abundance of data about the phrases you entered. You can find out how frequently the page is mentioned, a list of associated keywords and hashtags, top users, and more. On the right-hand side of the screen you'll find links for exporting data into a CSV file, and along the top of the screen are various filter options.

3. snitch.name. The snitch.name site is one of the easiest on this list to use. The site has several advantages over a regular search query on Google. For example, many social networks are either not indexed by Google, or only have very limited indexing. Snitch.name also prioritizes "people pages," whereas a regular Google search will also return results for posts mentioning the person, associated hashtags, and other content. Obviously, even after running a search, some profiles

might remain restricted depending on the said user's privacy settings. However, as long as you can access the account through your own social media account, you will be able to access the listing on snitch.name. To use the site, fire up the homepage, enter your search terms, and mark the checkboxes next to the networks you want to scan. When you're ready, click **Search**.

4. Social-Searcher. Social-Searcher is another web app that works across a broad array of social networks and other platforms. You can use the site without making an account. Non-registered users can search the web, Twitter, Facebook, YouTube, Instagram, Tumblr, Reddit, Flickr, Dailymotion, and Vimeo. You can also save your searches and set up email alerts. If you need a more powerful solution, you should consider signing up for one of the paid plans. For €3.50/month (US$4/month), you get 200 searches per day, three email alerts, three keyword monitors, and space for up to 3,000 saved posts. The top-level plan, which costs €20/month (US$23/month), increases the limits even further.

5. Social-Searcher: Google Social Search. The same team that is responsible for the previously mentioned Social-Searcher has also developed a Google Social Search tool. It works with six networks. They are Facebook, Twitter, TikTok, Instagram, LinkedIn, and Pinterest. You can mark the checkboxes next to the networks' logos to limit your search to particular sites.

6. Buzzsumo. It takes a slightly different approach to the tools we have mentioned so far. It specializes in searching for trends and keyword performance. That makes it an ideal tool for businesses; they can find out what content is going to have the biggest impact when they share it, as well as gaining an insight into the words and phrases their competitors are using. On the results page, you can use the panel on the left-hand side of the screen to create filters. Date, content type, language, country, and even word counts are searchable parameters. On the right-hand side of the page, you can see how successful each post was. Analytics for Facebook, Twitter, Pinterest, and Reddit are shown, as are the total number of shares.

2.4 Online Search Strategies

Introduction

Searching the internet can be a frustrating business. You enter a word or a phrase into a search engine and up comes a stack of irrelevant information.

What you need is the ability to refine your search to get exactly what you want.

Search engines sort through about 625 million active websites to provide you with content. You may favor one, but don't let habit restrict you. No search engine is perfect, and they all have different blind spots.

A keyword search usually is, usually, the most common way to search on the Web.

Nevertheless, a keyword search retrieves more items than a subject search, but they may not all be relevant. The computer is looking for the exact word you typed, not for the meaning or context of the word.

For example, a search on AIDS will retrieve items on...

- aids for the hearing impaired
- school aids
- AIDS (the disease)

Search strategy techniques

The most effective search strategy techniques are:

- Choosing search terms.
- Searching with keywords.
- Searching for exact phrases.
- Using truncated and wildcard searches.
- Searching with subject headings.
- Using Boolean logic.
- Citation searching.

Some search tips:

- Use only significant words, not common words, such as the, of, an, and that.

- Avoid using phrases such as "people with a bachelor degree", or whole sentences, such as "How do people buy alcohol if they are under 18?"

Choose Search Terms

Suggestions for choosing the best search terms:

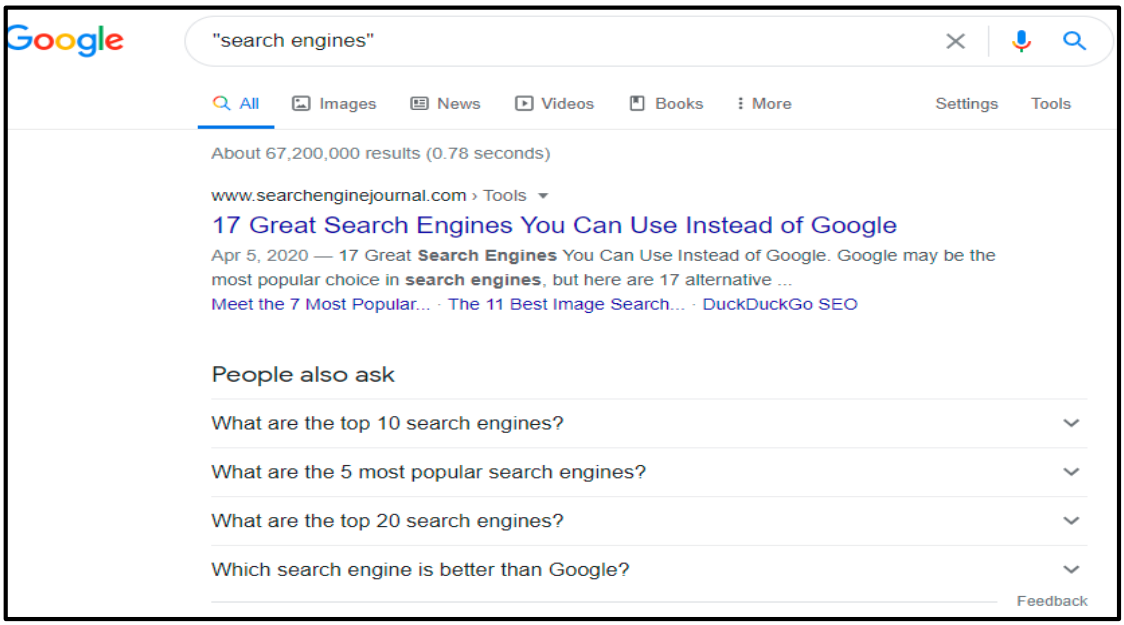
1. THINK LIKE A CUSTOMER. Identify your target audience and put yourself into the shoes of a customer when you create your initial list of keywords. Ask yourself, 'If I wanted to find one of these products or services, what would I type into Google?' You can also consult others, such as friends, family members, or even current customers to get their opinion on phrases they would use when searching for your products and services.
2. UNDERSTAND THE LONG TAIL KEYWORD. Long tail keywords are a combination of three or more words or phrases. While long tail keywords tend to boast lower search volumes, they generally attract more relevant traffic, are typically less competitive, and easier to rank well on. Choose long tail keywords that help to specify your product or service.
3. USE KEYWORD RESEARCH TOOLS. If you are using Google Ads you can use their keyword tool to research your potential target keywords. With this tools and others like SEMRUSH and Raventools, you can gather data on keyword volume and trends, keyword competition, similar keywords and more.
4. ANALYZE THE RESULTS. After choosing your keywords don't forget to monitor them and analyze the results. There are often trending keywords or phrases, along with new keywords your competitors may be using. Don't forget to utilize your keywords wherever possible! Insert your keywords into blog posts, social media posts, metatags and your website's content. The more you use keywords within your content, the easier it will be for your target audience to find you.

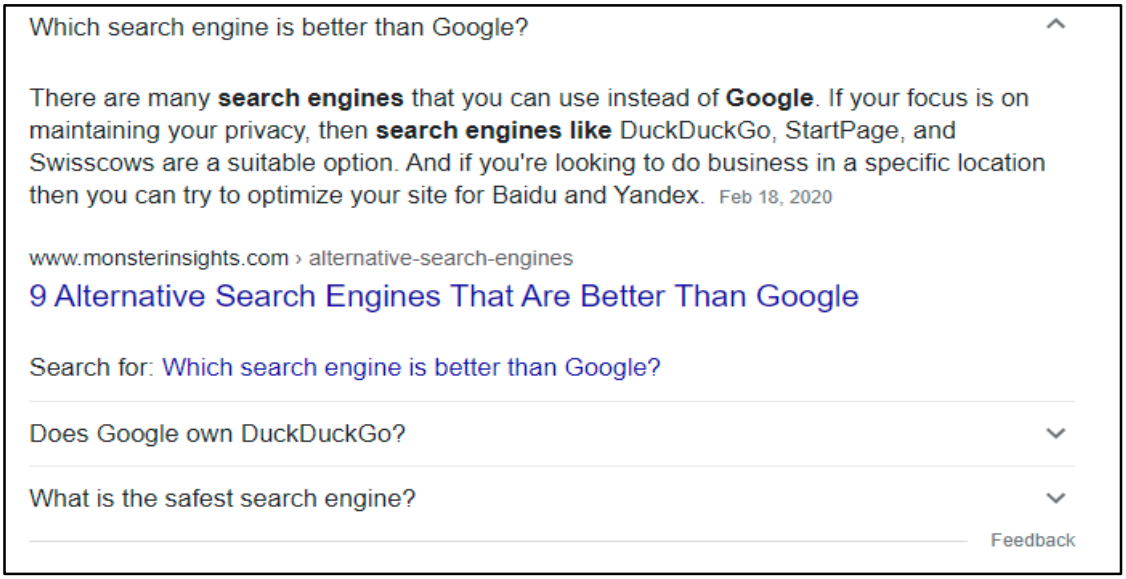
Searching with Keywords

The most effective way to begin your keyword search is to start with the broad concepts related to your topic and then add or try more specific keywords.

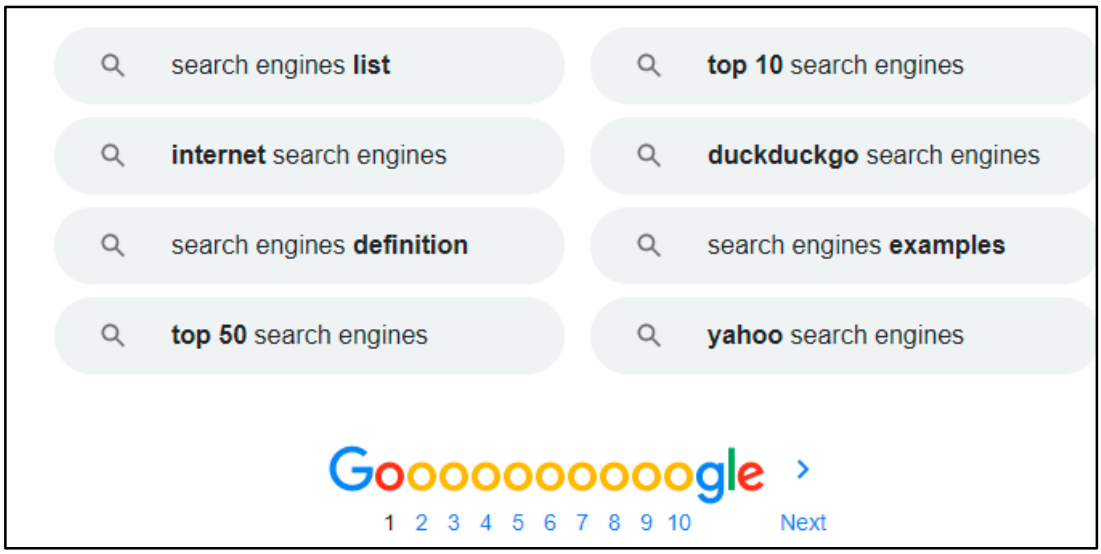
If you use Google, you can take advantages from the suggestions that Google gives you.

If you search for “search engines”, Google presents you with the following suggestions at the top of the result page.





Whilst, at the bottom of the result pages, Google shows you its suggestions to better specify your search.



Searching for Exact Phrase

Phrase searching involves placing double quotation marks ("__") around two or more words to create a search term. This technique narrows the search to retrieve only those results in which the exact phrase appears.

If you want words to appear next to each other in an exact phrase, use quotation marks, e.g., “search engines”.

Phrase searching decreases the number of results you get and makes your results more relevant.

Using Truncated Words

There are words that can be found in different forms e.g. depressed, depression, depressive.

We can use the * wildcard with word stems to avoid typing.

Accordingly, depress* will find depressed, depressive as well as depression.

The * acts like a wildcard replacing any number of characters at the end of a word. Limited truncation may also be used therap*4 will find thera**py**, thera**pist** but not thera**peutic**.

Google lets you search using wildcards, which essentially means that you can run a search with missing words. This is by far the most effective way to locate phrases when you don't have all the information.

For example, maybe you need to perform a partial name search because all you know about the person is their first and last name, but you're sure that their middle name is listed online, too.

Searching with Subject Headings

A ***subject heading*** is an assigned word or phrase used in some databases to uniformly describe a concept. Searching using this standardized word or phrase, instead of keywords, means you do not need to worry about synonyms and spelling variations.

At the moment, Google doesn't give you the possibility of searching with subject headings.

Constructing a search in Google can be very different from constructing a search in a research database, although many databases are now moving to a Google-type interface for basic searching. Google is designed to return results based on any or all of the words entered into the Google search box. A Google user does not need to specify connections between the terms and doesn't have to follow any particular rules to come up with some kind of result listing.

2.5 Tips for Effective Online Searches

Introduction

The ability to conduct effective online searches and critically evaluate sources are important research skills for all the internet users.

There are many ways to approach the research process, but a common method is one outlined by the 'Big6' model:

1. Task Definition
2. Information Seeking Strategies
3. Location and Access
4. Use of Information
5. Synthesis
6. Evaluation.

Task Definition

First, users need to define the topic being researched.

They can start by looking at Wikipedia (https:// www.wikipedia.org). They can find in Wikipedia the strong keywords to include in their online search. Then, they can use online dictionaries to broaden their vocabulary and find synonyms to put in OR in their query.

Users need to single out what kind of information constitutes successful research into their topic and what type of evidence might solve the question they are researching.

A Google image search can help to identify an object that you want to search for.

Information Seeking Strategies

Good searches start off broad and get narrower as more is learnt about the topic from doing the search.

Starting with a search on a specific term, users can use information they gain from reading around their original search results to inform the rest of their search. They can refine the search using an iterative process.

Users should define a list of keywords associated with their topic and refine them throughout the research process.

Another effective strategy is to imagine how the information found can be used to solve the problem that motivated the search.

Finally, users should stop their current search if the results don't meet their expectation and switch to a different search strategy.

Location and Access

A serious problem about searching for information online is the enormous amount of it.

There are lots of different types of websites on the internet, although many of them don't contain particularly useful information. Users need to select the more reputable sources.

A great way to determine if a search query has been successful is to analyse the page of results overall before looking at individual sources. . Instead of wading through pages and pages of results, users should improve their search query.

Users should learn to evaluate sources to determine if they are reliable, credible, trustworthy, accurate, unbiased and balanced.

The main questions users should ask include the following:

- Is the content relevant? Is it useful for my purpose? Does it contain links to other relevant sources? Is it at an appropriate reading level?
- Is the source believable? What type of source is it? (Published or official sources are better.) Who is the author? (Subject experts are better.) When was it published? (Newer

is often better.) Is the source unbiased, or at least balanced? Does it say where it gets its information from?

- Is the source true? Is it backed up by other sources? Does it sound right? Does it fit in with other things you know (assuming you have knowledge of the subject)?

Tips to Find Information on Google

Here there are a few tips that help easily find information on Google.

Tip 1: Start with the basics

No matter what you're looking for, start with a simple search like **where's the closest airport?**. You can always add a few descriptive words if necessary.

If you're looking for a place or product in a specific location, add the location. For example, **bakery Seattle**.

Tip 2: Search using your voice

Tired of typing? To search with your voice, say "Ok Google" or select the Microphone . Learn more about how to search with your voice.

Tip 3: Choose words carefully

When you're deciding what words to put in the search box, try to choose words that are likely to appear on the site you're looking for. For example, instead of saying **my head hurts**, say **headache**, because that's the word a medical site would use.

Tip 4: Don't worry about the little things

- **Spelling.** Google's spell checker automatically uses the most common spelling of a given word, whether or not you spell it correctly.
- **Capitalization.** A search for New York Times is the same as a search for new york times.

Tip 5: Find quick answers

For many searches, Google will do the work for you and show an answer to your question in the search results. Some features, like information about sports teams, aren't available in all regions.

- **Weather:** Search **weather** to see the weather in your location or add a city name, like **weather seattle**, to find weather for a certain place.

- **Dictionary:** Put define in front of any word to see its definition.
- **Calculations:** Enter a math equation like 3*9123, or solve complex graphing equations.
- **Unit conversions:** Enter any conversion, like 3 dollars in euros.
- **Sports:** Search for the name of your team to see a schedule, game scores and more.
- **Quick facts:** Search for the name of a celebrity, location, movie, or song to find related information.

Suggestions for Effective Google Searching

Some useful suggestions for Google searching are described below.

- Every word matters.
- Order matters.
- Capitalisation doesn't matter.
- Punctuation doesn't matter.
- Specific search terms are better – go from broad to more specific enquiries as you learn more while searching.
- Use 'Boolean' operators, such as 'AND,' 'OR,' and 'NOT.'
- Searching with the term 'filetype:' will narrow searches to specific file types. For example, 'trenches filetype:ppt' will search specifically for PowerPoint documents about trenches.
- Searching with the term 'site:' will seek out information within a website. If users find an excellent collection online, this term can help them find relevant information within it. For example, 'samurai site:tnm.jp' will find samurai-related material from the Tokyo National Museum website.
- Limit your search using Google parameters to search for different types of results such as images, news videos, maps and books.
- When searching for videos, use Google-search for videos (http:// www.google.com/video) rather than searching in YouTube as it searches more locations.
- Use a hyphen to exclude words and narrow searches. For example, 'knights -newcastle' will track down information about knights rather than the Newcastle Knights rugby league club.

- Search for a range of numbers using '..'. For example, '2001..2004' narrows searches to between the years 2001 and 2004. '..2004' searches for information before 2004. '2004..' searches for information after 2004.
- An asterisk acts as a wildcard. For example, a search for 'teen*' will include any text starting with 'teen,' such as teen, teens and teenager.
- Search for exact phrases by inserting quotation marks around the relevant text.

Additional Resources

• How to Use Google Advanced Search: https://www.youtube.com/watch?v=tNb0_N18RBc
• How to Google with Advanced Search Operators (9 Actionable Tips): https://www.youtube.com/watch?v=yWLD9139Ipc
• Advanced Web Search: https://www.youtube.com/watch?v=lBSg8naB-R0
• What is Advanced Search on Google?: https://www.bobology.com/public/What-is-Advanced-Search-on-Google.cfm
• How to Learn to Search/Advanced Web Search : https://websitebuilders.com/how-to/learn-to-search/advanced-web-search/

Module 3. Basic Concepts of Online Learning

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Learning Objectives

Upon completion of this Learning Unit, trainees will be able to:

- Understanding and elaborating basic concepts of online learning
- Understanding the different kinds and sources of online learning
- Making informed searches according to their preferences
- Realizing the advantages of online learning
- How to avoid information overflow and make informed choices of online courses
- Anticipate how to better organize themselves and use online resources efficiently
- Compare different online education sources

Basic Concepts (Key Words)

- Online Learning
- Synchronous Learning
- Asynchronous Learning
- Virtual Classroom
- Webinars
- Massive Open Online Courses
- Communication Platform
- Search Engines
- Online Education Resources
- Time Management
- Online Tutorials and Videos
- Information Overflow

Preliminary Notes

Online Learning and the value it has for Adult Learning

The rapid advancements in technology and science over the past few decades have facilitated the dissemination of knowledge and the development and evolution of education and learning processes at an unprecedented pace like never before in the past. A key development that supports and advances long-life learning and the promotion of adult skills and knowledge consists the proliferation, not just in numbers as well as in quality and breadth, of **Online Learning** courses and methodologies.

Online learning is catalyzing a pedagogical shift in how we learn and anticipate knowledge of the world around us. Online learning marks a shift away from top-down lecturing and passive students to a more interactive, collaborative approach in which students and their instructor co-create the learning process and interact in its development. On the other hand, online distance learning meets the needs of an ever-growing population of students and adult learners who choose not to participate in traditional classroom settings or are not able to participate, as the recent pandemic has horizontally posed that challenge. Online learners include among others, those unable or unwilling to attend traditional classes, who cannot find a particular class at their chosen institution, who live in remote locations, who work full-time and can only study at or after work, those who manage to find the resources and time to attend a course and those who simply prefer to learn independently.

The minimum requirement for students to participate in an online course is access to a computer, the Internet, and the motivation to succeed in a non-traditional classroom. Online courses provide an excellent method of course delivery unbound by time or location allowing for accessibility to instruction at any time from anywhere. Learners find the online environment a convenient way to fit education into their busy lives. The ability to access a course from any computer with Internet access, 24 hours a day, seven days a week is a tremendous incentive

Some of the main advantages of online learning include:

- **Convenience**: 24/7 access from any online computer; accommodates busy schedules; no commuting and loss of time to and from the school/university/education institution.
- **Enhanced Learning**: Research shows increased depth of understanding and retention of course content; more meaningful discussions; emphasis on writing skills, technology skills, entrepreneurial and life skills like time management, independence, and self-discipline.

- **Leveling of the Playing Field**: Students can take more time to think and reflect before communicating; anonymity of the online environment.

- **Advanced Interaction**: Increased student-to-teacher and student-to-student interaction and discussion; Real-time interaction and feedback drives student engagement and enable teachers to understand the levels of engagement; more student-centered learning environment; less passive listening and more active learning; a greater sense of connectedness, synergy.

- **Innovative Teaching**: Student-centered approaches; increased variety and creativity of learning activities; address different learning styles; changes and improvements can translate to on-ground courses as well.

- **Improved Administration**: Time to examine student work more thoroughly; ability to document and record online interactions; ability to manage grading online.

- **Savings:** Accommodation of more students; increased student satisfaction = higher retention and fewer repeats.

Basic Concepts of Online Learning

Unlike the compulsory school system, adult learning is a voluntary commitment based on high levels of motivation and pro-activity. Depending on the form of communication online education may belong to two distinct categories: **Synchronous and Asynchronous Learning**.

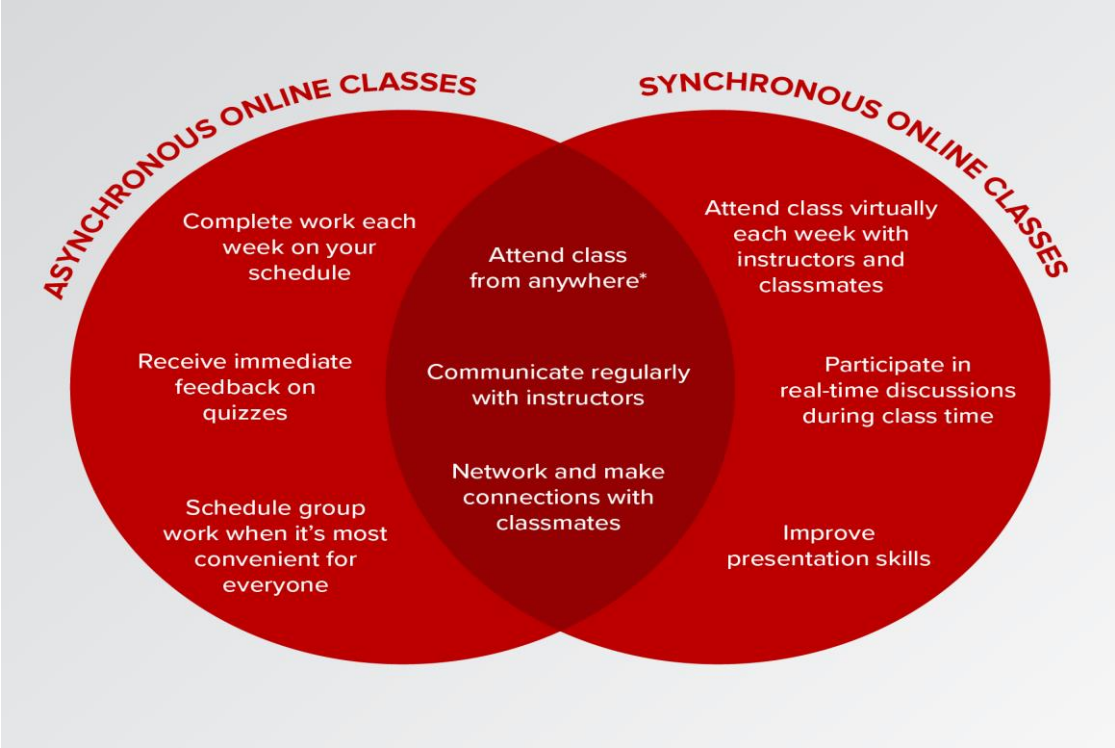
Synchronous Learning

Synchronous learning occurs live and in real-time supported by video conferencing solutions like Zoom, Go-to-Meeting and YouTube Live. When used in tandem with a remote teaching platform or learning management system, synchronous learning allows educators to replicate many of the experiences found in an in-person classroom. This includes the ability for attendees to access lecture slides, respond to interactive questions and engage with their classmates in discussion threads.

Asynchronous Learning

Asynchronous learning takes advantage of many of the same technologies. The main difference is that learning is self-paced and not reliant on adhering to a schedule. Educators can deliver content and assignments remotely using solutions like Zoom to record and post lectures online.

With the right technology, learners can interact with interactive digital textbooks, assignments, homework questions and discussion threads to support engagement with faculty and other students. The benefit, of course, is being able to do this without the need for participants to be online at the same time.



Source: ***Ohio State University***

Communication Platform

The core environment where the distance online learning process is taking place is the online *communication platform*. The term "platform" refers to an online environment with the functionality that allows the creation of separate sections, the assignment of distinct roles to participants, and gives the ability of direct communication between all stakeholders.

Communication platforms contain features that allow instant communication and files sharing over different mobile devices and enable enhanced student engagement. Conversations in communication platforms can come in different forms. Channels can be organized based on topic and these can be further set to public or private. Direct one-to-one messaging is also available. This means students are free to create their own private channels for informal

networking. Additionally, most communication platforms have support message reactions, such as emojis and GIF support, much like instant messaging applications.

Virtual Classroom

A *virtual classroom* is an online learning environment that allows teachers and students to communicate, interact, collaborate, and explain ideas. In many ways, an online classroom simply mirrors the physical classroom. In a physical classroom, the student needs to be able to see and hear the teacher, see and hear the other students and have a good view of the whiteboard and their own learning materials. In a virtual classroom, a student can see and hear the teacher via the video/audio stream. The online whiteboard allows teachers to explain ideas visually and work through exercises collaboratively. A virtual classroom has the aspects of web-conferencing needed to communicate effectively from opposite sides of the globe (video/audio conferencing, chat) and also a *virtual whiteboard, a library of resources and teacher tools*. The *online whiteboard* enables teachers and students to interact much more collaboratively and not just rely on video/voice. The *saved library* of learning resources enables teachers to access relevant, rich or structured lesson materials instantly and to create a much more dynamic class. *Teacher tools* empower a teacher to control the class and be much more effective online.

Virtual Classroom of IESE Business School, University of Navarra, Spain

Webinars

A webinar is a web-based seminar provided online by an educational or vocational training institution. Webinars may consist of events, video presentations, workshops, seminars, training sessions, or classroom lectures hosted and delivered online. What makes webinars effective is that they're a two-way form of communication where the attendees and presenters give, receive and share information with each other, in real time. Webinars can be pre-recorded and played at any time for participants. This makes them easier to set up, repurpose and budget-friendly compared to in-person events.

Massive Open Online Courses

Massive open online courses (MOOCs) are free education opportunities provided through various platforms and embraced by many Universities worldwide: edX (Cambridge, Princeton, and Stanford Universities), Coursera (MIT, Harvard) and University College London (IOE) and Udacity (San Jose). They are also used as an education tool in many Erasmus+ programs. MOOcs attract thousands of participants, are open to anyone to join, are free to undertake and are delivered fully online, thus transcending the spatial limitations of a traditional classroom. MOOCs are usually fairly short in duration, running from between 5 and 10 weeks, and require limited lecturer input. Participants are able to study anywhere at any time and at their own pace.

3.1 Online Learning Strategies

An online course requires just as much work as an on-ground format, and the amount of time you dedicate is also about the same. However, the online format—just as a virtual workplace—affords you more flexibility. Adjusting to an online learning model could be a challenge at first, but once you adapt to the format, there are numerous benefits to be realized. No matter the reason you choose to pursue online education, earning an online degree or certification or just learning through internet, it can help you advance your knowledge, prepare you for career advancement and demonstrate key skills to potential employers. By building good habits and strategies, you can make sure that you are using your time well, and getting the most out of your education.

Below you'll get through a number of key strategies and tips on how to make the best out of online learning.

Online Learning Strategies

Strategy no 1 # **Make a study plan and hold yourself accountable.**

Set small goals to tackle your work, and ensure they are achievable. Stay organized and create a schedule with dates and times for tasks that need to be completed. However, plan for some wiggle room as things will come up and you will need to readjust your schedule. As you complete tasks, check them off. This will help you feel like you are accomplishing your tasks and help motivate you to continue.

Strategy no 2 # Practice time management

The flexibility to create your own schedule is often one of the biggest appeals of taking online classes. But that freedom may also become a disadvantage, if you do not have solid time management skills. Without them, you might easily find yourself cramming before classes or handing in subpar assignments.

Though how you manage your time will depend on your schedule, learning style, and personality, here are some universally valuable tips to help you practice and improve your time management skills:

- Look at the syllabus at the start of the semester and **make note of major assignments**. Mark them on a calendar you check regularly so you know what workload is coming in the weeks ahead. Don't forget to **factor in prior commitments** that may interfere with your regular study schedule, such as weddings or vacations, so you can give yourself enough extra time to complete assignments.

- **Create a weekly schedule that you follow**, designating certain hours each week to reading, watching lectures, completing assignments, studying, and participating in forums. Commit to making your online coursework part of your weekly routine and **set reminders for yourself** to complete these tasks.

- When working on your assignments, **try time-blocking**, allotting yourself a certain amount of time for each task before moving on to the next one and setting a timer to keep you accountable.

- **Check in periodically throughout the term**, and look at how and when you're spending your time.

Strategy no 3 # Create a regular study space and stay organized

Set up a dedicated learning environment for studying. By completing your work there repeatedly, you'll begin to establish a routine. Whether your workspace is your kitchen table, a library, or the corner booth in a local coffee shop, it's important to determine what type of environment will work best for you. Experiment to discover which type of setting boosts your productivity. Wherever you choose, make sure there's high-speed internet access so you're not trying to take an online course over a lagging connection. Setting up a regular workspace or office will also help you to stay organized. Knowing exactly where important dates, files, forms, syllabi, books, and assignments live will help keep you on track towards hitting your goals. When setting up your study space, make sure you:

- Have a high-speed internet connection.
- Have the required resources (e-books, e-journals, books, materials, and software for the course).
- Have headphones for listening to lectures or discussions (especially important in shared spaces).

Strategy no 4 # Eliminate distractions

From Netflix to social media to dishes piling up in the skink, you'll be faced with many distractions that can easily derail your studies. The best online students know how to lessen these distractions and set aside time to focus. Exactly how much of a challenge these distractions will prove to be will depend on your own unique personality and situation. Some might find that they can tune out a noisy home by listening to music. Others might choose to work from a local coffee shop or library to eliminate their urge to multitask at home. Ultimately, you will need to find a strategy that works best for you.

Regardless of where you choose to work, consider turning your cell phone off to avoid losing focus every time a text message or notification pops up. And if you're still having trouble resisting the temptation to check your email or surf the web, try downloading a website blocker. Using applications like Cold Turkey and Freedom can help eliminate distractions by blocking the apps or websites that tend to compete for your attention, such as Facebook and Twitter.

Strategy no 5 # Evaluate your Learning. Figure Out How You Learn Best

Once you've established where you'll learn, think about when and how you accomplish your best work. If you're a morning person, make time to study first. More of a night owl? Set aside

an hour or two after dinner, to cozy up to your computer. If the kids require your morning and evening attention, try to carve out a study session mid-day while they're at school. Brew your usual cup of coffee, put on your go-to playlist, and do whatever you need to get into the zone and down to business.

Not everyone learns the same way, so think about what types of information help you best grasp new concepts and employ relevant study strategies. If you're a visual learner, for example, print out transcripts of the video lectures to review. Learn best by listening? Make sure to build time into your schedule to play and replay all audio- and video-based course content.

Strategy no 6 # Communicate Often and Actively Participate

Participate in the course's online forum to help you better understand course materials and engage with fellow classmates. This might involve commenting on a classmate's paper on a discussion board or posting a question about a project you're working on. **Don't hesitate to ask and raise questions!** Become proactive and take initiatives.

Read what other students and your professor are saying, and if you have a question, ask for clarification. Make sure you are checking in as often as you can, too. The flexibility of online learning means that if you have 30 minutes before dinner plans, you could squeeze in a discussion response around your schedule. Set a goal to check in on the class discussion threads every day. And in case you do feel yourself falling behind, speak up. Don't wait until an assignment is almost due to ask questions or report issues. Email your professor and be proactive in asking for help.

Strategy no 7 # Leverage your network

Online classes may sometimes make you feel like you are learning on your own, but this couldn't be further far from the truth. Most online courses are built around the concept of **collaboration**, with professors and instructors actively encouraging the students to work together to complete assignments and discuss lessons. **Build relationships** with other students by introducing yourself and engaging in online discussion boards. Your peers can be a valuable resource when preparing for exams or asking for feedback on assignments. Don't be afraid to turn to them to create a virtual study group. Chances are good that they will appreciate it just as much as you will.

Study Tips

- Set up a dedicated workspace that is distraction-free, well-lit, and comfortable. Gather your supplies and a beverage or snack before sitting down to study or attend class. Close all

distractions on the computer, including social media sites and chat programs.

- Take breaks to maintain focus and avoid fatigue. Studying for 30-45 minutes and then taking a short break away from the computer will help you stay focused and retain the information you're learning.

- Offline study tactics, such as writing notes down or creating visual aids can help you retain the information covered during your classes.

- Make a plan by creating a weekly schedule of your deadlines and study hours to make sure you have time set aside to complete your assignments on time.

- Using a color-coding system in your study calendar or agenda will allow you to identify different due dates quickly.

- Find a study partner, who can help you clarify requirements and complete assignments on time.

- Take notes frequently and review them immediately after class. Taking notes will encourage you to remain focused, and studying them after class will make sure the notes are clear and can be relied on later on.

- Bookmark any resources you've found helpful in your studies, so you can easily access them later.

- Online learning requires self-motivation. Take some time to develop habits that work for you specifically when it comes to time management and study practices. Review your assignments and get started on the work as soon as possible. Starting early on your tasks will ensure that you have time to study properly and succeed in your online courses.

Practice Online Learning Etiquette

Etiquette is a word that means good behaviour in a certain situation. In this case, we use the phrase **online learning etiquette** for guidelines, so everyone has a good online learning experience. Below you'll find a set of helpful guidelines for effectively communicating in an online community.

1. **Use respectful language and tone at all times.** In an online learning environment, words are more important than ever! In text or email conversations, we cannot see the writer's facial expressions or body language to help us guess their tone or meaning. Interpreting body language can also be difficult in video chat conversations. As such, choose your words carefully.

2. **Never share inappropriate content.** We must never share inappropriate material, such as sexual or violent images/video, with anyone. If you feel someone is sharing inappropriate content with you or others, contact education staff immediately and they will help you address the issue.

3. **Respect others' beliefs and opinions, even when you disagree.** We all have different beliefs, values, and traditions. Remember to give others the time and space to express their thoughts and feelings. If you disagree with someone, remind yourself that they have a right to their opinion, just like you do. If constructive disagreement is part of an assignment, make sure your arguments use respectful language. When in doubt, remember the Golden Rule: treat others the way you would like to be treated.

4. **Dress appropriately for video meetings, and remember your mute button.** While there is no specific dress code for online courses, we encourage you to dress as if you were attending online classes. When you are not speaking, consider putting your microphone on "mute".

5. **Respect others' privacy.** It is very easy to share contact information, documents, and other digital items through the internet. Remember, however, that everyone has a right to their privacy. Always ask permission before sharing contact information or documents that belong to someone else.

Advantages and Key Competences that may be acquired when embarking at an Online course of study

1. Added Flexibility and Self-Paced Learning

Not many people have the ability to take time off from work to commit to a full-time graduate program, and others often travel for work. For those who still need to juggle working and going back to school, the flexibility of an online program provides individuals with the opportunity to learn while still working and growing professionally.

By engaging in an online course or a degree, you can learn on your own schedule. Rather than leave the office early or skip family dinner to commute to campus, you're logging on when it's convenient for you—at a time that doesn't interfere with other commitments. That flexibility allows you to more easily balance work, life, and studying.

Additionally, students don't always feel comfortable asking tutors to repeat a point they made in their last lecture or dive into deeper detail on a specific topic. When learning online, you can revisit past material or stop the lecture to perform additional research or organize your notes.

You can work through the lesson plan at your own pace to ensure you're really mastering the material before moving on to the next section. This added flexibility allows online learners to move through the course work at their own speed and get the most out of the degree program.

2. Better Time Management

Juggling work, family, and school isn't an easy thing to do. Employers recognize this and value the time management skills it takes to balance all three. Because there are no set classroom times within an online degree program, and students have the flexibility to create their own schedules, it's up to the student to proactively reach out to faculty, complete assignments on time, and plan ahead.

One of the things we know employers expect is that we manage our time effectively. It's never enough to be at your desk on time in the morning and stay through the end of the day; most of us are expected to get more projects done in less time. Online classes keep you on a regular schedule of making and meeting deadlines, allowing you to practice managing your time and staying productive week-to-week. Employers often appreciate the time management skills needed to complete an online degree program and view these skills as a valuable asset in potential employees.

A sample schedule may look similar to this:

- **Monday**: Begin required readings and multimedia.
- **Tuesday**: Continue reviewing materials.
- **Wednesday**: Post to the discussion forum and begin assignments.
- **Thursday**: Continue posting and working on assignments.
- **Friday**: Read and respond to posts and work on assignments.
- **Saturday**: Read and respond to posts and finish assignments.
- **Sunday**: Check your work and submit assignments.

3. Demonstrated Self-Motivation

By successfully finishing your course, you're demonstrating that you can practice time management and self-motivation, which are among the top 10 employability employers want to see in new hires. By succeeding in earning an online degree, you prove that you can tackle multiple tasks, set priorities, and adapt to changing work conditions. Instructors expect students

to be independent, to learn on their own, and to engage with the material that they are teaching. It's the same thing in the workforce; employers want you to be self-motivated, go after things that interest you, and seek new opportunities and ways of doing things. The more you put your heart into it—whether it's learning online or working for your employer—the more you'll succeed.

4. Improved Virtual Communication and Collaboration

Learning to work with others in a virtual environment can make you a more effective leader. You'll develop critical leadership skills by utilizing specialized knowledge, creating efficient processes, and making decisions about best communication practices, such as what should be discussed in-person or electronically. In an online program, you'll also participate in discussion boards with your classmates, communicate with professors via email, and collaborate through various software programs. As the program progresses, you'll get better at pitching your ideas and making strong, succinct, professional arguments through text.

Participating in discussion boards is a lot like participating in a virtual team. Communicating your ideas clearly, getting responses, and projecting a professional image are necessary skills in a virtual workplace. Instructors, just like managers, expect you to write respectful, thoughtful, and polite communications, respond to different perspectives, and build a rapport with your peers. In an online program, you may refine this skill quickly— post after post, week after week, course after course.

5. A Broader, Global Perspective

Students in online programs come from all over the world. Because of the ability to log on from any location, class discussions feature a broader range of perspectives, helping you enhance your own cross-cultural understanding. Students then not only have the opportunity to network with people from around the globe, but can also broaden their perspective and become more culturally aware. Businesses are looking for employees who can innovate, and innovation often comes from outside your immediate world.

If you're interested in entrepreneurship, for example, hearing how other countries adopt certain technologies or approach specific industries can inspire new ideas or improve an existing concept you've been developing. Being exposed to new ideas from professionals in other countries may spark creativity of your own—creativity that can turn out to be valuable for your organization.

6. Refined Critical-thinking Skills

Online learning facilitates the ability to think critically about what you do every day. The goal in the classroom is to challenge you to think differently, and employers want you to do that, too– to think critically in your role at work. Mastering this skill is what will set you apart as a student, and as an employee.

Critical thinking plays a role in any type of education; however, online learning forces you to develop your critical thinking skills in ways that you might not have practiced in an in-person classroom setting. This sort of self-paced and self-motivated learning demonstrates to future employers that you have the ability to think critically and overcome any obstacles that might stand in your way.

7. New Technical Skills

Your online course or program also equates to strong technical skills, a definite plus for any job seeker. As part of your coursework, you will likely need to utilize digital learning materials, get familiar with new tools and software, and troubleshoot common issues. After a program's worth of technical hurdles, big and small, an employer could trust that you are versed in common collaboration tools, content management systems, and basic troubleshooting.

With more companies using virtual teams, it's important to learn how to collaborate remotely. Your classmates will likely live in different time zones, which you need to learn how to adapt to and schedule around. Embracing technology is also crucial. When you're working on a group project, sharing files or status updates can become difficult via email, so you might need to utilize project management and communication tools, such as:

- **Skype**: The video conferencing software lets you speak face-to-face with your peers.
- **Dropbox**: Share documents with your group and keep work in one place using the file hosting service.
- **Slack**: The messaging platform is helpful if you need to instant message in real-time or break off into smaller groups to work on a specific part of the project.
- **Trello**: The project management tool enables you and your team to create, assign, track, and prioritize to-dos.
- **Basecamp**: Another, slightly more robust, project management tool you can use to share messages and upload files.

3.2 How to Search the Web

There is a huge amount of information on the Internet. You may find information on anything actually, however, in order to be more effective and make better use of your time, you should use search engines so as to downsize your search and find the information you look for faster and more effectively.

Using Search Engines

Search engines on the World Wide Web are remotely accessible programs that let you do keyword searches for information on the Internet. There are several types of search engines and searches may cover titles of documents, URL's, headers, or full text. Keep in mind that the results you get from one search engine may not match the results you get from another search engine. In fact, they are often different due to the way each search engine behaves. Therefore, it may actually be beneficial to use more than one search engine on a regular basis.

Search engines use keywords or phrases you choose to determine which web pages have relevant information. Think of a search engine as an index for the web. Below you'll find a list with the most popular and known search engines, as well as, search engines which are dedicated particularly to support searching for education courses, institutions and programs.

Search Engines

- Ask
- Bing
- Google
- Google Scholar - a scholarly subset of Google.
- Yahoo

Academic Search Engines

- Microsoft Academic - find information about academic papers, authors, conferences, journals, and organizations from multiple sources.
- Scienceresearch.com - scientific journals and public science databases.
- WorldWideScience - global science gateway.

- BASE (Bielefeld Academic Search Engine) (Germany) - multi-disciplinary scholarly, open-access web resources.
- Google Scholar (International) - offers instant access to a variety of academic resources. Its process looks virtually identical to the typical Google keyword search.
- Internet Scout (US) - critically annotated, carefully selected web sites and mailing lists.
- Pinakes (UK) - links to major subject gateways.
- SSRN (Social Science Research Network) eLibrary Database Search - scholarly working papers and forthcoming papers.
- VLRC (Virtual Learning Resources Center) (International) - academic information websites.
- WWW Virtual Library (International) - high quality guides to particular sections of the web.
- Semanticscholar (International) - AI-powered research tool for scientific literature, based at the Allen Institute for AI.

EXERCISE: Use the link below to go to the Google web site and follow along with the instructions.

- **Step 1.** When you first go to the Google web site there is a blinking cursor in the search edit box near the middle of the page. Either way, as you begin typing, an auto-complete list may appear.
- **Step 2.** You can press **DOWN ARROW** to move through the list and then **ENTER** to perform a search, or you can simply continue typing what you are searching for without using the list.
- **Step 3.** After you have typed in some text, press **ENTER** to activate the Search button.

Web Search Engine Tips

Use Keywords

Using **good keywords** gives you better results. Be as much specific as you can. Narrow your search and use better keywords, you get more relevant results

Phrase Searching

When using search terms containing more than one word, enclosing them in quotation marks, returns documents containing the exact phrase only. Here's an example: When searching for

information on gun control legislation, using “gun control” eliminates documents that contain the words gun and control, but not in that order, and possibly having nothing to do with gun control.

Truncation

If you are looking for information on gardening, you could use it as your keyword. However, if your results are limited in number (though not likely with gardening) and you want to broaden your search, use a root part of the word and abbreviate it with an asterisk (garden*). The engine will return links to documents containing gardens, garden, gardener, gardeners, and so on.

Quick Searches

Many search engines now allow you to quickly search for specific types of content, simply by including a keyword at the beginning of your search. For instance, if you want to find out the weather in Paris, simply type “weather Paris” and you should get the current forecast for Paris. If you need a definition, include the word “dictionary” before the word you want to define.

Advanced Search

Some search engines offer an advanced search page, where you can further narrow your search. For instance, Google’s Advanced Search allows you to use many of the search functions listed above, as well as several additional parameters.

Boolean Expressions

Perhaps the most useful feature in defining search criteria, Boolean operators provide you with powerful control over search engine logic. The Boolean operators AND, OR, NOT (or AND NOT in some engines), and NEAR allow you to create more specific search results.

3.3 Online Tutorials and Videos

In this section and in order to facilitate and assist you during your online reading and searches, a number of links with online Tutorials and Videos have been selected and concentrated. The idea behind Online Tutorials is that anyone who interested to know about how to search the web, how to take on computer classes, how to get knowledge about Microsoft office applications, digital marketing and literally on any issue that require a structured and easy to comprehend online course, can do it on his/her own pace. Online Tutorials are self-study activities that may lead to a number of advantages for online learners including the acquisition of digital and entrepreneurial skills.

Online Tutorials

The resources for Online Tutorials are numerous and some may even involve gaming exercises. We'll next guide you through **Digital Learn** Online Tutorials platform and provide you information for other resources, which you may access so as to find tutorials and programs of study according to your preferences.

Digital Learn

If you are new to computers, haven't used them for a while, are a little unsure and uncomfortable, or just need a bit of a refresher, the material provided in this Unit will help you find reliable and well structured resources. Through an interactive library of video tutorials the tutorials can help you tackle technology at your own pace and gain the confidence you need to succeed. Tutorials are available in English and even in Spanish.

The Platform provides easy to use and follow Online Tutorials through short video presentations, between 1' and 5:30' and each Tutorial last for approximately 15' to 20' and is accompanied by text copies of the courses for beginners to more advanced learners.

The Tutorials are separated into seven (7) main categories:

1. Starting Out

It includes the online tutorials with video:

1. Why Use a Computer? https://www.digitallearn.org/courses/why-use-a-computer

2. Getting Started on a Computer https://www.digitallearn.org/courses/getting-started-on-a-computer

3. Using a PC (Windows 10) https://www.digitallearn.org/courses/using-a-pc-windows-10

4. Navigating a Website https://www.digitallearn.org/courses/navigating-a-website

5. Intro to Email https://www.digitallearn.org/courses/intro-to-email

6. Intro to Email 2: Beyond the Basics https://www.digitallearn.org/courses/intro-to-email-2-beyond-the-basics

7. Basic Search https://www.digitallearn.org/courses/basic-search

8. Using a PC (Windows 7) https://www.digitallearn.org/courses/using-a-pc-windows-7

9. Using a Mac (OS X) https://www.digitallearn.org/courses/using-a-mac-os-x

10. Intro to Searching Videos on YouTube https://www.digitallearn.org/courses/intro-to-searching-videos-on-youtube

11. Introduction to Google Maps https://www.digitallearn.org/courses/introduction-to-google-maps

2. Being Safe Online

It includes the tutorials:

1. Accounts & Passwords https://www.digitallearn.org/courses/accounts-passwords

2. Online Scams https://www.digitallearn.org/courses/online-scams

3. Internet Privacy https://www.digitallearn.org/courses/internet-privacy

3. Job Skills

It includes the tutorials:

1. Creating Resumes https://www.digitallearn.org/courses/creating-resumes

2. Online Job Searching https://www.digitallearn.org/courses/online-job-searching

3. Applying for Jobs Online https://www.digitallearn.org/courses/applying-for-jobs-online

4. Being Productive

It includes the tutorials:

1. Microsoft Word https://www.digitallearn.org/courses/microsoft-word

2. Cloud Storage https://www.digitallearn.org/courses/cloud-storage

3. Creating a Basic Budget with Excel https://www.digitallearn.org/courses/creating-a-basic-budget-with-excel

4. Online Health Information https://www.digitallearn.org/courses/online-health-information

5. Using Healthcare.gov to Enroll in Health Insurance

https://www.digitallearn.org/courses/using-healthcare-gov-to-enroll-in-health-insurance

6. Using MyHealthFinder for Preventive Care https://www.digitallearn.org/courses/using-myhealthfinder-for-preventive-care

5. Connecting with Others

It includes the tutorials:

1. Intro to Skype https://www.digitallearn.org/courses/intro-to-skype

2. Intro to Facebook https://www.digitallearn.org/courses/intro-to-facebook

6. Mobile Devices

It includes the tutorial:

1. Using a Mobile Device (Android) https://www.digitallearn.org/courses/using-a-mobile-device-android

7. Online Shopping

It includes the tutorial:

1. Buying a Plane Ticket https://www.digitallearn.org/courses/buying-a-plane-ticket

Another Online Tutorials platform is provided by Edinburgh University under the title **23 things** http://www.23things.ed.ac.uk/. The University of Edinburgh's 23 Things for Digital Knowledge is an award winning (LILAC Credo Digital Literacy Award 2017) self-directed course, run by Information Services Group. The programme seeks to expose students to a range of digital tools for personal and professional development either as researchers, academics, students, or professionals.

23 Things List

Thing 1: Introduction

Thing 2: Blogging

Thing 3: Digital Footprint

Thing 4: Digital Security

Thing 5: Diversity

Thing 6: Accessibility

Thing 7: Twitter

Thing 8: Facebook

Thing 9: Google Hangouts/Collaborate Ultra

Thing 10: Wikimedia

Thing 11: Copyright

Thing 12: Open Educational Resources

Thing 13: Video (YouTube/Vimeo/MediaHopper)

Thing 14: Audio (Podcasts/SoundCloud)

Thing 15: Digital Curation

Thing 16: OneNote/ClassNotebook

Thing 17: Geolocation Tools

Thing 18: Augmented & Virtual Reality

Thing 19: Altmetrics

Thing 20: LinkedIn / Academia.edu / ResearchGate

Thing 21: Online Games & Learning Tools

Thing 22: Fun and Play

Thing 23: Reflection

Other Online Tutorial Platforms, where someone can find and explore on a range of course are:

GCF Learn Free

From computer basics to advanced Microsoft Office, GCF Learn Free features more than 2,000 lessons for learners of all skill levels. Courses blend text, video, interactives, and short assessments to give learners the skills they need to thrive in the 21st century. The entire library is available in English, Spanish, and Portuguese. Select courses are available in other languages.

Tech Boomers

Access over 100 free courses for specific apps and Web sites, along with thousands of useful articles with the tips and tricks you need to take your tech skills to the next level. Tech Boomers is designed to help older adults and inexperienced Internet users learn how to use trusted websites and apps through video and text-based tutorials.

Comcast Internet Essentials

New to the internet? Comcast Internet Essentials is a great place to start, and has been working to close the digital divide since 2011. This interactive library of tutorials covers topics ranging from the basic—navigating the Internet and staying safe online—to more advanced skills like applying for student loans and learning computer programming.

Khan Academy

Khan Academy is a free library of interactive content, videos, and self-paced assessments designed to help you master computer programming, math, science, and much more. Courses cover a variety of skill levels. Partner content from institutions such as NASA, The Museum of Modern Art, and the California Academy of Sciences helps learners study high-quality material at their own pace.

EdX

Founded by Harvard and MIT in 2012, EdX is a non-profit library of MOOCs—massive open online courses. Learners can take free courses in computer science, data and statistics, business, and other topics from more than 130 of the world's best universities and institutions.

An important breakthrough on Adult Learning education is also taking place within the European Union, through the **Electronic Platform for Adult Learning in Europe – EPALE**. EPALE is a European, multilingual, open membership community of adult learning students and professionals, including adult educators and trainers, guidance and support staff, researchers and academics, and policymakers. EPALE is funded by the Erasmus+ programme. EPALE provides a wealth of high-quality, accurate information relevant for adult learning practitioners.

In its Resource Center, it includes about 322 e-learning sources and programs, whereas about 70 are particularly for Adult Learners https://epale.ec.europa.eu/en/resource-centre?f%5B0%5D=im_field_resource_tags%3A12116&f%5B1%5D=im_field_resource_tags%3A11754

Further Online Tutorial Resources

As we've discussed earlier, Massive Open Online Courses are a great free resource for online education, as well as, a mode of self-paced study. Below you'll find a number of Tutorials ranging from Management Studies to understanding climate change and the acquisition of entrepreneurial skills through gaming. You may even attempt your own search.

EXERCISE: Use the link below to go to the Mooc-List website and follow along with the instructions.

Step 1. On the menu at the top of the website https://www.mooc-list.com/ find and click the "Search" button.

Step 2. At the space "Course Title Contains", type the keyword '**Entrepreneurship**'.

Step 3. Check on the results and guide yourself through the available options. Use other keywords depending on your learning interests.

Massive Open Online Courses

The University of Navarra provides free access via MOOCs to everyone wanted to engage in business, finance and management.

https://awaytolearn.iese.edu/meet-us-online/?_ga=2.241232322.1743460288.1611336632-1036041938.1611336632

Online Courses and Tutorials by the United Nations Learning Partnership

UN Climate Change Learning Partnership (UN CC:Learn) is a joint initiative of more than 30 multilateral organizations helping countries to achieve climate change action both through general climate literacy and applied skills development. UN CC:Learn provides strategic advice and quality learning resources to help people, governments and businesses to understand, adapt, and build resilience to climate change. UN CC:Learn is supported by the Swiss Agency for Development and Cooperation (SDC).

https://unccelearn.org/course/index.php

Entrepreneurship Skills for Adult Learners (SG4A)

This project has been funded by the **Erasmus +** programme of the European Union. BIZ-E-BEE is designed based on a needs analysis conducted in six countries to (further) develop entrepreneurial skills. 80-85% of the respondents mentioned as main skills: taking initiative, innovative capacity, responsibility, confidence, communication skills and problem solving skills. Followed closely by goal orientation, resilience, reliability and team building.

The game BIZ-E BEE has three levels, divided into three game boards: wanna bee (budding entrepreneur) working bee (working as an entrepreneur) and queen bee (born entrepreneur). Each level has its own questions and tasks. The rules may vary by level, at the discretion of the teacher / game leader. The object of the game is to finish on the highest level as soon as possible.

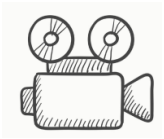
http://www.sg4adults.eu/index.php

Online Videos

Learning through Videos is an effective way of understanding education material and topics. According to studies, short videos may also improve student learning in online education.

In any case, online education videos stimulate learning in a meaningful way and constitute a significant education resource for online learning as a whole. In this section you'll get through a number of education videos that may support you in your online reading experience.

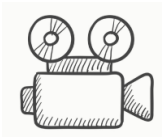
1. How I take notes - Tips for neat and efficient note taking



VIDEO

https://www.youtube.com/watch?v=njstk6xlrh0

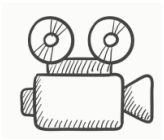
2. How to Effectively Study with Online Courses



VIDEO

https://www.youtube.com/watch?v=H-deFSyeXSM

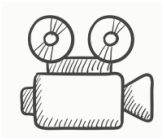
3. Five Tips for Successful Online Learning



VIDEO

https://www.youtube.com/watch?v=xeQrdCMk6vI

4. How search engines work?



VIDEO

https://www.youtube.com/watch?v=dahryueQepE

Since there is so much readily accessible information, Internet users must learn to filter the data they find on the **W**orld **W**ide **W**eb. Because the Internet is such a vast source of information of varying quality, web resources must be evaluated for authority, reliability, objectivity, accuracy, and currency. More traditional sources of information, such as an article in an encyclopaedia, are screened with all those criteria in mind by authors, reviewers, editors, and publishers. That is not the case for most of the information on the Internet. No one has to approve the content of web sites, so it is your job to assess the appropriateness of the data you find on the Internet.

3.4 Evaluating Online Sources

What are Online Sources?

The term ***'online sources'*** refers to any materials that can be found online. An online source could be a blog post, a newspaper article published online, a journal article you have read online, an academic study, an online video, an e-book, a TV programme or a documentary, an interview or a recorded lecture and literally anything that has been published online from an accredited source. However, since not all information found on the Internet may be from a non-authenticated or un-trusted source, you may perform a quick evaluation of your resources before you proceed with using it for online learning.

Why should you evaluate online resources?

The Internet is a valuable source of information, which can be added to or accessed by people across the globe. While this means that we have free access to a diverse range of sources, it also means that the information published may not always be credible or accurate, as anyone could have written it.

When searching for sources to use in your assessments, you may come across materials that seem suitable. However, you should never take an online source, or an offline one, at face value. You should always critically evaluate a source to test its credibility and accuracy before using it for an assessment, so as to ensure that you are supporting your arguments with correct and credible information.

How can I evaluate online (and offline) sources?

A well-known strategy for testing the quality of resources is the **CRAAP test**. The test focuses on five key aspects that can indicate the quality of a source and includes questions to ask of a source to evaluate its quality.

CRAAP test

Currency

The timeliness of the information:

- When was the information published?
- Has there been any updates or revision to the information?
- Are the sources used by the author current or outdated?
- Is the information out-of-date for the topic?

Relevancy

The importance of the information to your context:

- Does the information answer your question?
- Is the information related to your topic?
- Have you looked for other sources before settling on this one?
- Is the information appropriate to your level of study? Is it too simple or too sophisticated?

Authority

The source of the information:

- Who is the author?
- Is the author qualified to write on the topic?
- Has the material been peer-reviewed or reviewed by editors?
- Has the author been cited elsewhere?

Accuracy

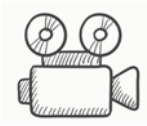
The reliability, truthfulness and correctness of the content:

- What types of other sources have been cited?
- Does the information line up with your own knowledge on the topic?
- Are there any spelling or grammar errors in the text?

Purpose

The reason the information exists:

- What is the purpose of the information? Is it to inform or persuade?
- Is the author clear what their intentions are?
- What biases might the author have?



VIDEO

How to Evaluate Quality of the Information? The CRAAP Test

https://www.youtube.com/watch?v=EyMT08mD7Ds&feature=emb_title

So You Found Something on the Web: Should You Use It or Lose It?
https://www.youtube.com/watch?v=dahryueQepE

3.5 Avoiding Information Overflow

How can you recognize the portion of information that you really need and avoid "Too Much Online Information (TMOI)? Start by setting your own **Learning Plan**. A learning plan may keep students focused on a particular subject or project and may be made by following five (5) simple steps:

1. Set Your Goals

Your learning goals need to be specific and measurable. If you don't have your goals put in place, you'll be just running around grabbing every possible advice and thinking that it's "just what you've been looking for."

Setting goals is a much more profound task than just a way to get rid of information overload. Find out what you need to learn ***now*** and make it a specific, measurable learning goal. Then once you have your goals, they become a set of strategies and tactics you need to act upon.

2. Know What to Skip When Facing New Information

Once you have your goals, plans, strategies and tasks, you can use them to decide what information is really crucial. First of all, if the information you're about to read has nothing to do with your current goals and plans, then skip it. You don't need it.

If it does, then ask yourself these questions:

- Will you be able to put this information into action immediately?
- Does it have the potential to maybe alter your nearest actions/tasks?
- Is it so incredible that you absolutely need to take action on it right away?

If the information is not actionable in a day or two, then skip it.

Digest only what can be used immediately. If you have a task that you need to do, consume only the information necessary for getting this one task done, nothing more. You need to be focused in order to have clear judgment and be able to decide whether some piece of information is mandatory or redundant.

3. Schedule your learning

Schedule your learning by creating **a learning calendar.**

As you're trying to learn new skills and new subjects you need to organize your time. You need to schedule your learning, so as to achieve your goals in a timely and effective manner.

Set up a 1 to 2 hours session each day or 2-4 hours each weekend or even more according to your needs and begin learning from your categorized goals.

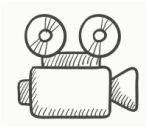
You may even wake up an hour earlier to spend some time learning before you start your day.

If you have children, schedule your learning goals into the days that aren't so hectic. And use smaller learning portions like 15-20 minutes timeframes.

Sometimes it's just easier and faster to write something down rather than cut and paste it into an app or word document. Therefore **using a notebook**, may assist in your learning. Use a separate notebook or sketchbook for each categorized learning goal.

4. Don't Procrastinate by Consuming More Information

Probably one of the most common causes of consuming huge amounts of needless information is the need to procrastinate. By reading yet another article or putting other little 'things to do' between our learning tasks, we often feel that we are indeed on track. However, this is just self-deception. The truth is we're simply procrastinating. Procrastination is putting off starting or finishing a task despite knowing that it will seriously compromise the pace and quality of our learning – for instance, putting off an assignment until the last minute.



VIDEO

Online Classes & Virtual Learning - How to Manage
https://www.youtube.com/watch?v=ggCM27LNHoo

Additional Resources

- Free Online Computer Classes for beginner, intermediate and advanced learners: https://www.thoughtco.com/online-computer-classes-1098078
- Free search engine to find and compare online programs from top universities around the world: https://www.educations.com/search/online-degrees
- Discover specialist courses and training in key sectors and industries: https://www.futurelearn.com/
- Free online courses and resources from Open University (UK): https://www.open.edu/openlearn/
- Basic Computer Skills MOOC (you may log in as a guest): https://www.wisc-online.com/courses/computerskills
- Education courses provided by the European Institute of Innovation and Technology
  EIT Digital Courses and Specializations
  https://www.coursera.org/eitdigital
  EIT InnoEnergy
  https://sea.innoenergy.com/learn
- Financial Literacy: a Key Tool to Improve People's Life Cycle
  An international project funded by the Erasmus + program of the European Union
  https://vimeo.com/277260385

Module 4. Basic Concepts of Online Interactions

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Rezekne Academy of Technologies

Learning Objectives

By the end of the Learning Unit, trainees will be capable of:

- Understand what is online interactions
- Use effectively online interactions in practice
- Describe the key elements of online interactions
- Able to use a variety of different approaches for effective online interactions
- Understand and develop basic concepts of online interactions, using basic knowledge of information literacy and digital content creation tips
- Be aware of safety rules and key problem-solving during online interactions
- Realize advantages of online interactions

Basic Concepts (Key Words)

▪ Online Interaction	▪ Digital Content
▪ Digital Competence	▪ Problem-solving during Online Interactions
▪ Digital Competence Framework	▪ Social Media
▪ Information Literacy	▪ Safety in Digital World
▪ Digital Environment	▪ Online Environment

Preliminary Notes

Certainly, most of us have once attended a long and boring teaching/learning process (virtual or face-to-face), where the students are merely passive observers and are given little or no opportunities to participate. The truth is, this type of instruction hardly makes an impact on the audience. For effective learning and retention the effective interaction is necessary. This is what makes the experience more worthwhile and valuable for the learner.

The most essential for learning and engagement according to M.G. Moore is three types of interaction as in traditional study environment as in online one:

- between learner – learner;
- between learner – educator;
- between learner – content.

The key aspect is how to apply the learning theories of traditional study environments into the online one, through online interactions.The focus should be put on all three types of the mentioned interactions to make this process more effective:

1) Between Learner-Learner

This type of interaction happens between two learners or among a group of learners. This type of interaction can happen with or without the instructor, only by organizing the learners. The most important – to plan for learner-learner online interaction in teaching/learning by considering student collaboration and information sharing, to build a sense of community within fellow students taking the study process, don't just encourage them to share their insights, but to create a learning atmosphere where they can participate, offer response, draw affective feedback and communicate in short, focused messages. This fosters powerful relationships among students and allows them to better understand your material. Such type of interaction enables students to interact with each other even in an educator's absence through new technology. It is possible to start with discussion boards, telecommunication tools such as email and chat rooms, and social collaboration tools. For example, to provide a student-only forum where learners can discuss their interests or to schedule chat sessions that they can attend to discuss a specific topic.

2) Between Learner-Educator

This type of interaction happens when the educator delivers information, provides feedback or simply encourages or guides the learner. It also takes place when a learner asks the instructor questions or communicates with him or her regarding the study process. The educator serves as a guide, a facilitator, an expert or a support depending on the situation, while learners can

interact with fellow learners. By providing ongoing feedback to learners, the educator can clarify issues, reinforce crucial points and correct interpretation of a subject matter, and stimulate learners' interest and motivation. The key difference is that an online educator does not take centre stage during online interactions, just becomes a "guide on the side" and not a "sage on the stage." The process is organized in the way of online dialogues (through e-mail address, social media accounts, etc.); by monitoring the student's performance and participation, by offering timely or prompt feedback, by providing clear and detailed information to the learners for every step of the way.

3) Between Learner-Content

This type of interaction takes place when students themselves obtain information directly from online learning materials. It happens whenever they interact with the text or are deeply engrossed with the digital content. It is important to offer different formats of online content – text, audio or video as well as checking the understanding afterwards. Moreover, to create challenging tasks that require students to interact with the digital content and explore the topic in greater detail. Simulations, web searches, scenarios, case studies, etc[1].

4.1 Online Interaction - Introduction, Key Factors and Elements

What is an interaction?

1) According to Cambridge dictionary – an interaction is an occasion when two or more people or things communicate with or react to each other[2];

2) While according to Merriam-webster – this is mutual or reciprocal action or influence [3].

3) Wikipedia offers one more definition - interaction is a kind of action that occurs as two or more objects have an effect upon one another. The idea of a two-way effect is essential in the concept of interaction, as opposed to a one-way causal effect[4].

If to speak about the examples of interaction in casual way – this is communication of any sort, including:

- ✓ the communication between two or more people,
- ✓ communication among groups,
- ✓ organizations,

[1] K. Gutierrez, 3-types of interactions you should be sustaining in e-Learning. https://www.shiftelearning.com/blog/bid/308389/3-types-of-interactions-you-should-be-sustaining-in-elearning
[2] https://dictionary.cambridge.org/dictionary/english/interaction
[3] https://www.merriam-webster.com/dictionary/interaction
[4] https://en.wikipedia.org/wiki/Interaction

- ✓ nations or states: trade, migration, foreign relations, transportation.

While ONLINE interaction is the communication organized online through the usage of different digital tools.

The Concept of Competence

Nowadays **the concept of competence** is widely used in different spheres, while originally it has been used mainly in the context of professional activity.

The term competence is defined as the necessary knowledge, professional experience, understanding in a particular area, issue and ability to apply the knowledge and experience in a particular activity[5].

So the key elements of any competence are attitudes, knowledge and skills.

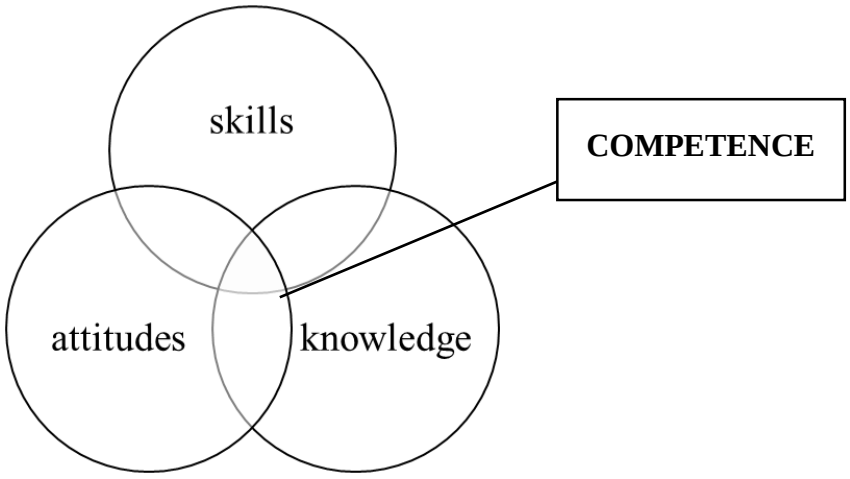


Figure 1 ***Competence Key Elements***

In order to proceed in online interaction, digital competence is needed. The development of the digital competence concept was created by P. Gilster in 1997.

[5] https://www.igi-global.com/dictionary/competence-pedagogy/51405

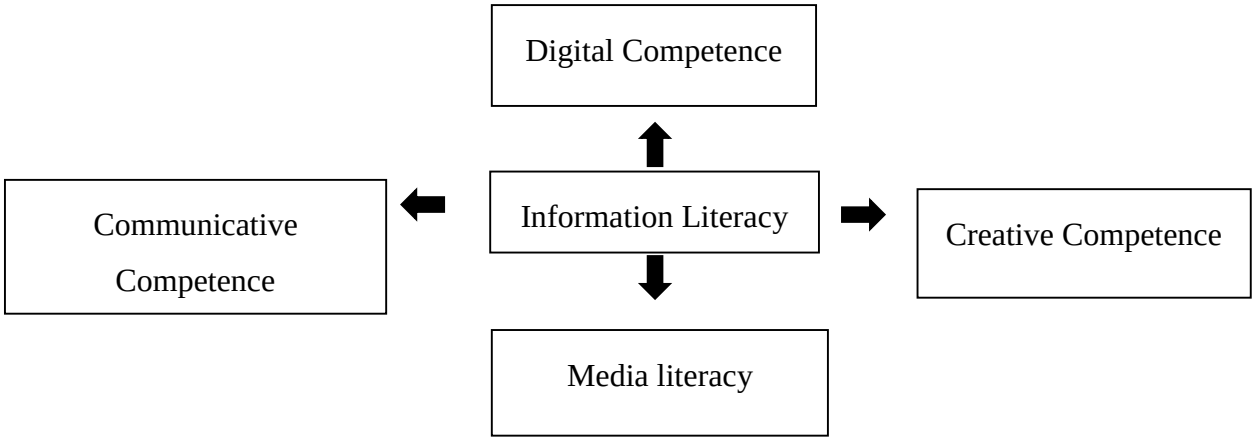


Figure 2 ***Digital Competence Concept***[6] ***(****by P. Cilster, 1997****)***

Digital Competence Framework Reflection

Nowadays the Digital Competence Concept is based on the EU Digital Competence Framework or DigComp.

The European Digital Competence Framework, also known as DigComp, offers a tool to improve citizen's digital competence. Today, being digitally competent means that people need to have competences in all areas of DigComp.

The Digital Competence Framework can help with self-evaluation, setting learning goals, identifying training opportunities and facilitating job search[7].

The first version of the DigComp Framework included the following aspects:

[6] http://www.ascd.org/publications/educational-leadership/nov97/vol55/num03/A-New-Digital-Literacy@-A-Conversation-with-Paul-Gilster.aspx
[7] https://ec.europa.eu/jrc/en/digcomp

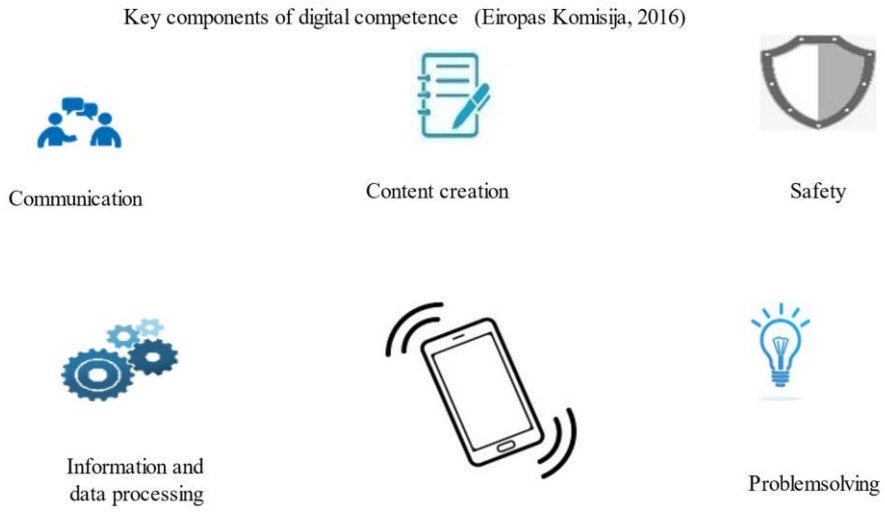


Figure 3 ***DigComp*** *(EC, 2016)*

Two years later DigComp 2.0 has been improved and the five key components have been specified as following:

- ✓ *Information and data literacy* instead of information and data processing; To articulate information needs, to locate and retrieve digital data, information and content. To judge the relevance of the source and its content. To store, manage, and organise digital data, information and content.
- ✓ *Collaboration* has been added to *communication*: To interact, communicate and collaborate through digital technologies while being aware of cultural and generational diversity. To participate in society through public and private digital services and participatory citizenship. To manage one's digital identity and reputation.
- ✓ Content creation has been specified by *digital content creation*: To create and edit digital content To improve and integrate information and content into an existing body of knowledge while understanding how copyright and licences are to be applied. To know how to give understandable instructions for a computer system.

- ✓ *Safety* component has not been changed: To protect devices, content, personal data and privacy in digital environments. To protect physical and psychological health, and to be aware of digital technologies for social well-being and social inclusion. To be aware of the environmental impact of digital technologies and their use.
- ✓ *Problem solving* has not been changed: To identify needs and problems, and to resolve conceptual problems and problem situations in digital environments. To use digital tools to innovate processes and products. To keep up-to-date with the digital evolution[8].

Center for Digital Dannelse has developed the Digital Competence Wheel for self-evaluation of digital competence. The purpose of the Digital Competence Wheel is to provide an overview of which digital competences exist and should be improved, as well as concrete inspiration for how to improve the most relevant digital competences.

The Digital Competence Wheel is theoretically based on a major EU research project, DigComp.

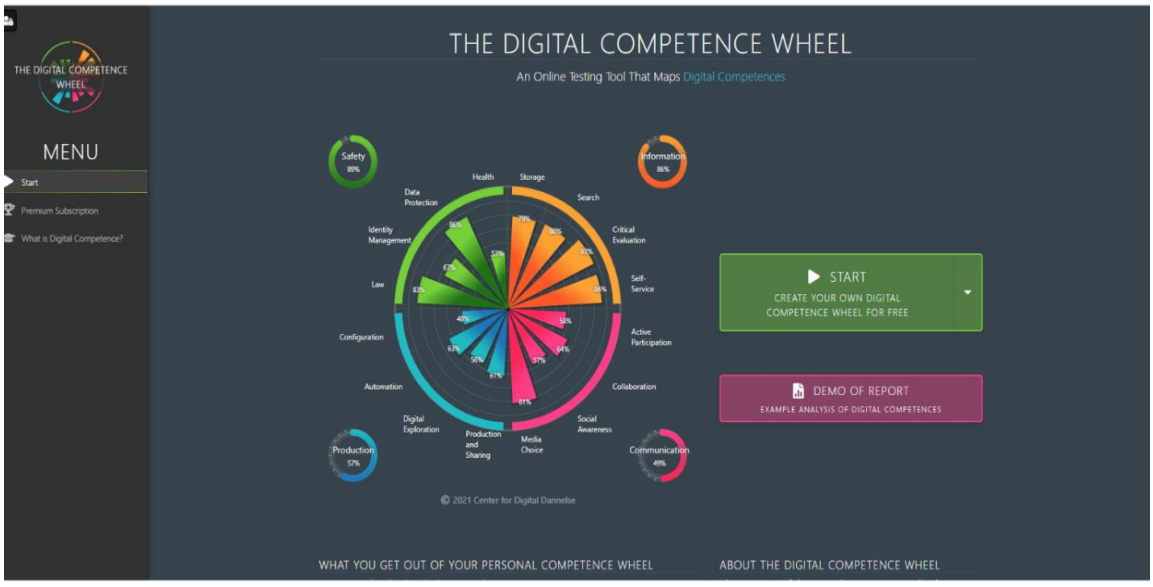


Figure 4 ***DigComp Wheel***[9]

8 https://ec.europa.eu/jrc/en/digcomp/digital-competence-framework
9 *https://digital-competence.eu/*

Figure 3 ***Online Interaction***[10]

Online interaction is used to describe the communication and collaboration between users and online communities on the web. Online communities often involve members to provide content to the website and/or contribute in some way. Examples of such include wikis, blogs, online multiplayer games, and other types of social platforms.

Some key examples of online knowledge sharing infrastructures include the following:

- ✓ Wikipedia;
- ✓ Slashdot;
- ✓ Usenet;
- ✓ Etc.

Wikipedia: An online, publicly editable encyclopedia with hundreds of thousands of editors;

Slashdot: A popular technology-related forum, with articles and comments from readers. Slashdot subculture has become well-known in Internet circles.

Usenet: Established in 1980 as a "distributed Internet discussion system", it became the first medium for Internet communities. Volunteer moderators and votetakers contribute to the community.

Etc. (the Web 2.0 is also referred to as the "writable web" for indicating that many people participate to the creation of its content).

[10] https://www.webdhoom.com/important-steps-to-boost-traffic-to-your-youtube-channel

Key Factors and Elements of Online Interactions

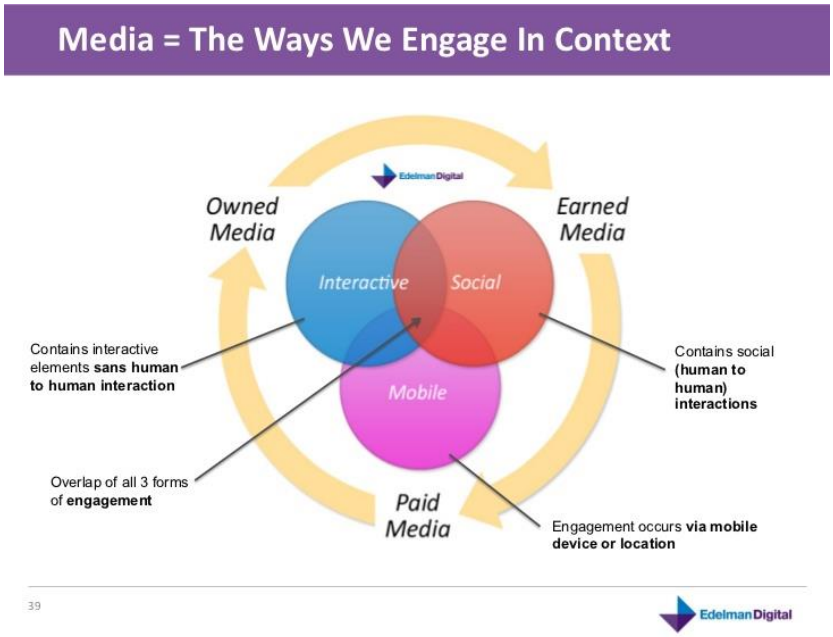


Figure 4 ***Online Interaction through Media***[11]

As an essential point of online interaction is online communication, therefore the key factors and elements of online interaction are similar to basic steps of the communication process. There are **seven different steps** of the basic communication process: the sender; the message; encoding the message; the medium; the receiver; decoding the message; message feedback[12].

Social media is interactive digitally - mediated technologies that facilitate the creation or sharing and exchange of information, ideas, career interests, and other forms of expression via virtual communities and networks.

While challenges to the definition of *social media* arise due to the broad variety of stand-alone and built-in social-media services currently available, there are some common features:

- ✓ Social media are interactive Web 2.0 Internet-based applications;
- ✓ User-generated content—such as text posts or comments, digital photos or videos, and data generated through all online interactions—is the lifeblood of social media;
- ✓ Users create service-specific profiles for the website or app that are designed and maintained by the social-media organization;
- ✓ Social media facilitate the development of online social networks by connecting a user's profile with those of other individuals or groups.

[11] https://www.slideshare.net/darmano/test-3505949/39-YES_This_is_a_product
[12] https://bizfluent.com/info-8411786-seven-elements-communication-process.html

Users usually access social media services via web-based apps on desktops and laptops, or download services that offer social media functionality to their mobile devices (e.g., smartphones and tablets). As users engage with these electronic services, they create highly interactive platforms through which individuals, communities, and organizations can share, co-create, discuss, participate, and modify user-generated content or self-curated content posted online.

Additionally, social media is used: to document memories; learn about and explore things; advertise oneself; and form friendships along with the growth of ideas from the creation of blogs, podcasts, videos, and gaming sites.

This changing relationship between human and technology is the focus of the emerging field of technoself studies.

Some of the most popular social media websites, with over 100 million registered users, include Facebook (and its associated Facebook Messenger)
TikTok, WeChat, Instagram, QZone, Weibo, Twitter, Tumblr, Baidu Tieba, and LinkedIn.
Depending on interpretation, other popular platforms that are sometimes referred to as social media services include :
YouTube, QQ, Quora, Telegram, WhatsApp, LINE, Snapchat, Pinterest, Viber, Reddit, Discord, V K, Microsoft Teams, and more. Wikis are examples of collaborative content creation.

Figure 5 ***Social Media***[13]

[13] https://alliancewebservices.com/social-media/

4.2 Information Literacy in Online Collaboration

Information Literacy – What Does it Mean?

Information literacy as a set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued and the use of information in creating new knowledge and participating ethically in communities of learning. According to the UNESCO website, this is their "action to provide people with the skills and abilities for critical reception, assessment and use of information and media in their professional and personal lives.

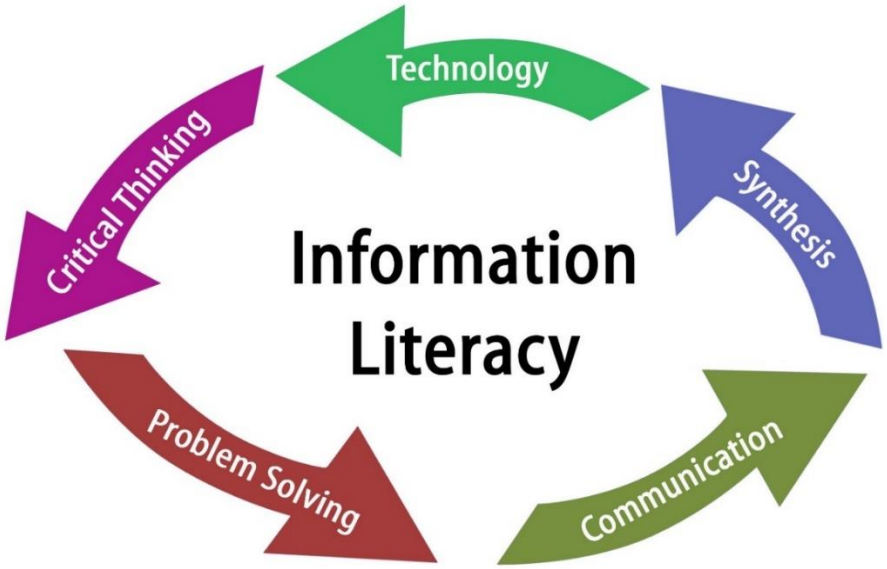


Figure 6 ***Information Literacy***[14]

Information Literacy is the set of skills needed to find, to retrieve, to analyze and to use information. Information Literacy is important as it allows us to cope by giving us the skills to know when we need information and where to locate it effectively and efficiently. It includes the technological skills needed to use the modern library as a gateway to information. It enables us to analyze and evaluate the information we find, thus giving us confidence in using that information to make a decision or create a product.

[14] https://hannahkimeds152.wordpress.com/2014/10/22/unit-1-module-3-task-8-locating-web-resources-activity/

Everyone needs Information Literacy, as being information literate ultimately improves our quality of life as we make informed decisions[15].

Types of Information Literacy

There are several types of information literacy:

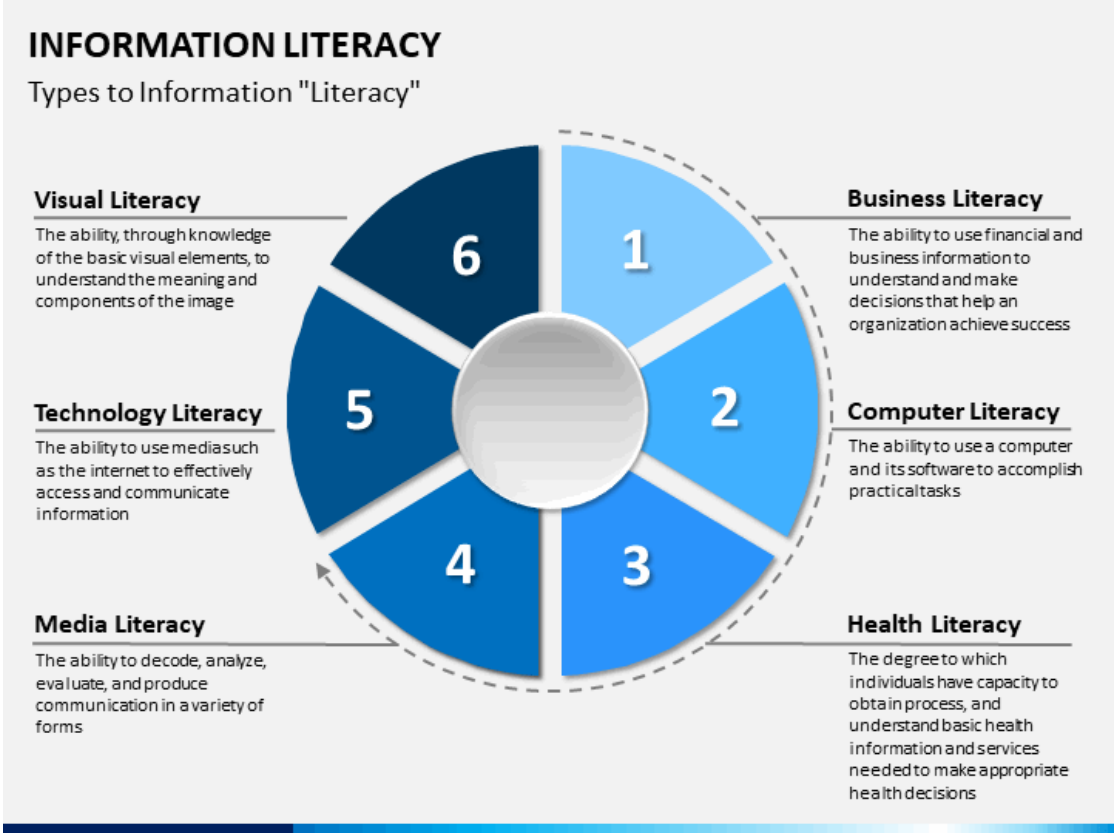


Figure 7 ***Information Literacy***[16]

[15] https://hannahkimeds152.wordpress.com/2014/10/22/unit-1-module-3-task-8-locating-web-resources-activity/

[16] https://www.sketchbubble.com/en/presentation-information-literacy.html

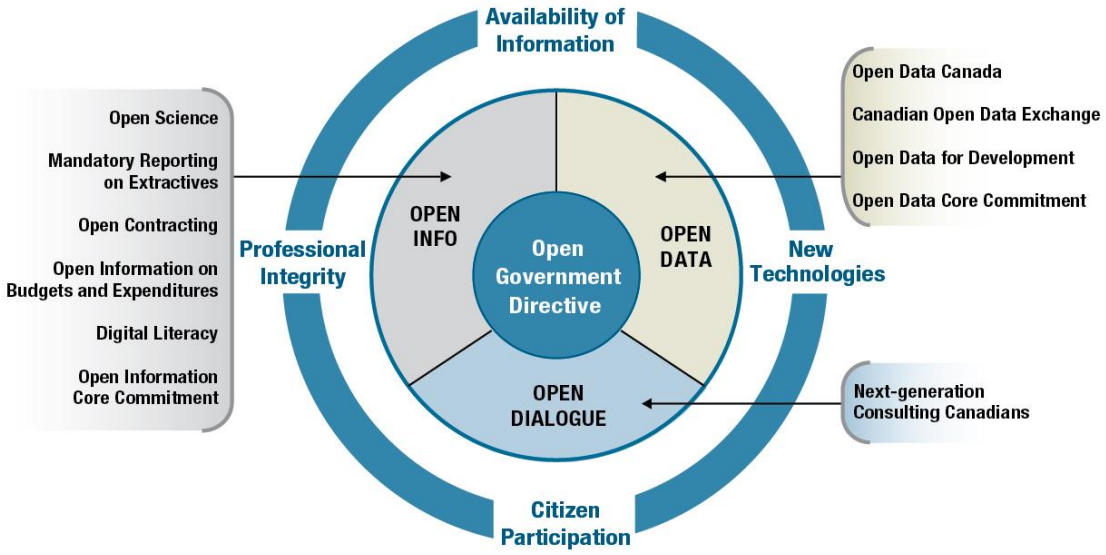


Figure 8 ***Availability of Information***[17]

As most people have learned, anyone can write anything in a book or on the Internet. Just because something is in print in any form does not make it accurate and factual. Just because you heard it on television or radio, does not make it true. Just because something was stated persuasively, or convincingly, by your favorite politician, actor, singer, author, or best friend, does not make it fact.

Therefore, it is important to evaluate the sources and information you use for references whether your purpose for using them is for a discussion, an exchange of ideas with a colleague or friend, or information you are using to base your vote for a particular candidate on[18].

So it is really important to make your information credible. There are several tips how to do this:

- ✓ Credible source
- ✓ Known author
- ✓ Mislead of information (in special way)
- ✓ Verify the accuracy
- ✓ Understand the difference between fact and opinion[19]

[17] https://www.wikihow.com/Find-Information-Online

[18] https://owlcation.com/academia/Evaluating-Your-Sources-of-Information

[19] https://owlcation.com/academia/Evaluating-Your-Sources-of-Information

Storage of Information and Data

Digital data storage is essentially the recording of digital information in a storage medium, usually by electronic means. The storage device typically enables a user to store large amounts of data in a relatively small physical space and makes sharing that information with others easy. The device may be capable of holding the data either temporarily or permanently.

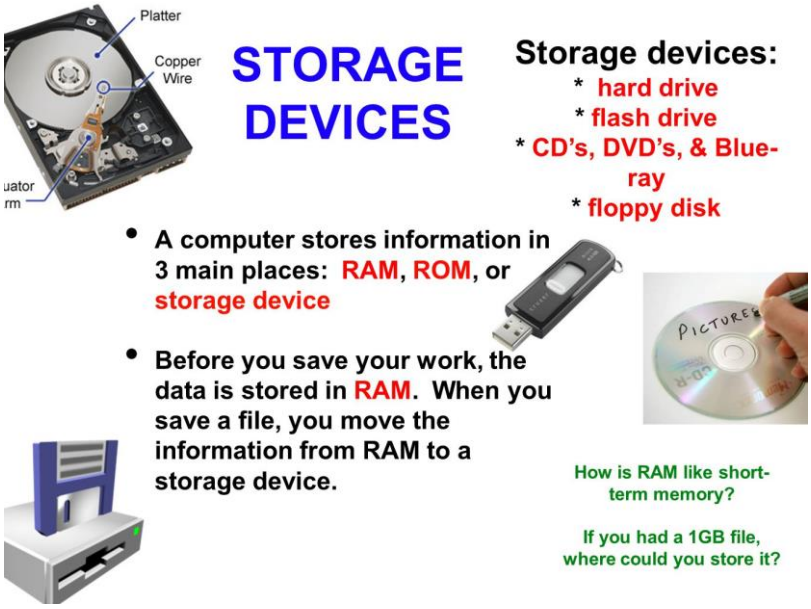


Figure 9 ***Storage of Information***[20]

Digital data storage media generally fall into one of five categories: magnetic storage devices, optical storage devices, flash memory devices, online/cloud storage, and paper storage.

10 Digital Data Storage Devices for Computers:

1. Hard Drive Disks
2. Floppy Disks
3. Tapes
4. Compact Discs (CDs)
5. DVD and Blu-ray Discs
6. USB Flash Drives
7. Secure Digital Cards (SD Card)s
8. Solid-State Drives (SSDs)
9. Cloud Storage
10. Punch Cards[21]

[20] https://slideplayer.com/slide/1506330
[21] https://turbofuture.com/computers/Examples-of-Data-Storage-Devices

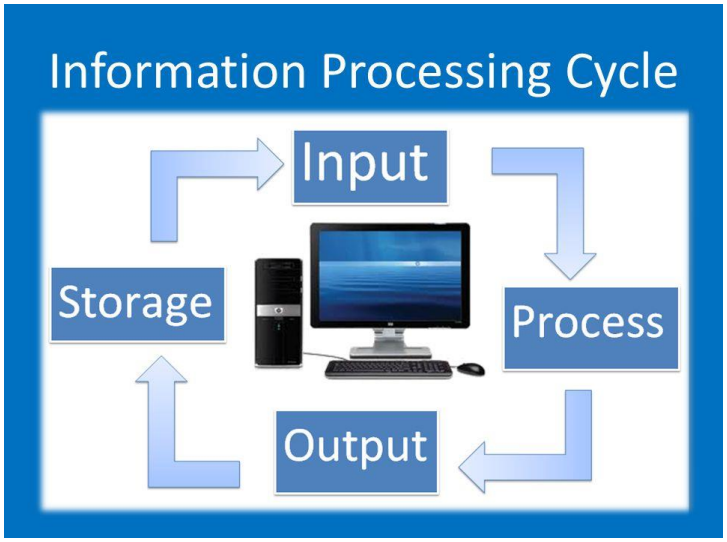


Figure 10 ***Information processing Cycle***[22]

Cloud storage - the solution for the future - with users increasingly operating multiple devices in multiple places, many are adopting online cloud-computing solutions. Cloud computing basically involves accessing services over a network via a collection of remote servers. Although the idea of a "cloud of computers" may sound rather abstract to those unfamiliar with this metaphorical concept, in practice, it can provide powerful storage solutions for devices that are connected to the internet.

Why Information Literacy is Important for Online Interactions?

Digital literacy is separate from computer literacy. It requires critical thinking skills, an awareness of the necessary standards of behaviour expected in online environments, and an understanding of the shared social issues created by digital technologies.

Digital literacy = digital tool knowledge + critical thinking

+ social engagement.

Digital literacy is necessary to become digital citizens: individuals responsible for how they use technology to interact with the world around them.

Deep learning is the essential component for digital literacy, including six core skills:

- ✓ collaboration (the ability to work collaboratively with others, with strong interpersonal and team-related skills);
- ✓ creativity (being able to weigh up opportunities in an entrepreneurial manner and ask the right questions to generate new ideas);
- ✓ critical thinking (being able to evaluate information and arguments, identify patterns and connections, and construct meaningful knowledge and apply it in the real world);

[22] https://slideplayer.com/slide/3916702/

✓ citizenship (the ability to consider issues and solve complex problems based on a deep understanding of diverse values and a worldview);

✓ character (traits such as grit, tenacity, perseverance, and resilience; alongside a desire to make learning an integral part of living;

✓ communication being able to communicate effectively through a variety of methods and tools to a range of different audiences[23].

4.3 Interaction through Digital Technologies

Online Communication/Collaboration

A 2019 study has shown that 89% of people using video conferencing tools feel more connected online. One can only guess at how these numbers from 2019 will spike in 2020, the year of the COVID-19 pandemic. Federal and local governments have asked their citizens to practice "**social distancing**," a non-pharmaceutical containment measure meant to reduce the spread of viral infection.

Cut off from social interaction, many are turning to technology to maintain social and professional relationships. Teleconferencing programs, group chat apps, and other digital tools are part of everyday life now as we attempt to strike a balance between isolation and connection[24].

Online Communication Tools

Figure 11 ***Online communication***[25]

[23] https://resourced.prometheanworld.com/digital-literacy-classroom-important/
[24] https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning/

[25] https://gust.mairiederufisque.org/online-communication/

Basic Communication Tools include mail, email, telephones, landline telephones, cell phones, smartphones, Internet calling: Google Voice and others; sms/text messaging, cell and data plans, video and web conferencing, social networking sites, G-Suite and Microsoft 365/Office, online collaboration/productivity tools[26].

Tips for Effective Online Communication

Despite prioritizing the value of person-to-person connection and the innovative ways to improve those connections in the digital era have been developed.

For those seeking an effective means of online communication, 8 top tips to help to establish the most meaningful of interactions during this period of social distance have been listed.

1. Discerning Personal and Professional Communication

The first step to effective online communication is being able to discern the differences between personal and professional communication. Determining this will allow you to make important decisions such as which app or digital tool to use, where to set up your call, and how you share information.

If you're asked to participate in a video meeting in a professional context, it's wise to set up shop in your home office or some other quiet and clean space that won't distract other meeting attendees. Whether it's a Google business hangout, Skype interview, or Zoom online meeting, you want to prepare ahead of time to make sure you're ready when the meeting starts. Be sure to download the app onto your smartphone or laptop and test out your audio and visual settings with a friend or family member before your meeting. If there are documents you'd like to share with the person or people you'll be meeting with, be sure to email them a copy ahead of time so they have time to review it beforehand.

Personal communication, on the other hand, is less formal than professional teleconferencing situations. Chats of a casual nature can be done anywhere around the house and you can even prop up your phone while attending to your kids or cooking a meal for your family. In this case, consider the sensibilities of the person or people you're communicating with. If you're involved in an activity that might make others uncomfortable to watch, it's best to wait until you're finished to jump on that group video chat.

2. Understanding Digital Etiquette

Some may have heard the term "netiquette" being used in online circles. Netiquette defined simply refers to the code of courtesy and respect followed when communicating with others on the Internet. Online etiquette is important to keep in mind for all modes of online

[26] https://www.scu.edu/mobi/business-courses/starting-a-business/session-8-communication-tools/

communication, whether it's texting, emailing, or video chatting. Here are some netiquette basics for you to consider:

- Do not send emails and text messages in ALL CAPS. This is one of the cardinal rules of netiquette. If you're attempting to accentuate a word, statement, or thought, try putting the statement in bold type or using the highlight function to draw attention to your words.
- Do not bully, stalk, or harass others. This sounds like a no-brainer but anger happens to the best of us. When someone disagrees with you about a particular topic, allow them their opinions, and avoid blowing up their inbox with your own opinions on the matter.
- Start speaking at a normal volume when talking over the phone or video chat. No need to yell unless you've checked all volume settings first!
- Respect privacy. Do not share personal photos or media of loved ones unless they have given you permission first.
- Avoid sending spam to others, keeping your messages succinct and meaningful, rather than a succession of forwarded content created by others. Keep in mind your loved ones want to hear from you, not a stranger.
- Be yourself even if you're not used to communicating digitally. Don't say to anyone anything you wouldn't say in person.
- Schedule an opportune time and date when setting up a video chat with loved ones. Give them some time to prepare or download the correct app first, whether it's through Skype, Zoom, Facetime, Snapchat, Bluejeans, Instagram or other medium.

3. Choosing A Digital Tool That Works For You

We are lucky to have incredible 4G connectivity to help us communicate in the digital age. Many feel fulfilled from a simple phone call or text message exchange. Others rely on video chats enabled by FaceTime, Zoom, or other apps. At this time, many feel comforted seeing the face of their loved ones while unable to meet in person. With 5G well on its way, people will be able to connect at a greater scale.

A video chat during the current global pandemic can be a vital source of solace and healing right now.

4. Classroom Etiquette

As schools and college campuses scurry to move their spring semester classes online amid the COVID-19 outbreak, classroom netiquette has become an important topic for students and teachers alike. Even those participating in professional training and eLearning courses are called to practice effective communication and respectful behavior in the virtual classroom.

Here are some classroom netiquette tips to consider:

- Participation: raise your hand to ask questions just as you would in the classroom. Some virtual classroom apps also have a hand raising button you can press to alert the instructor that you have a question.
- No chat bombing: there is usually a chat window in most online classroom apps. Be respectful of that space and refrain from filling the chat with topics that are off subject or distracting to the instructor and students.
- Share feedback with your instructor if something about the class isn't working for you. Constructive feedback is necessary to improve the process and streamline your learning curve.

5. Understanding Formal vs. Informal Tones

Tone is important when you can't speak in person. Many have experienced the confusion that abounds when a sarcastic text isn't well received. Chances of miscommunication are high when you're relying on communication through the phone or computer.

It's advisable to avoid sarcastic comments whether communicating personally or professionally (unless your friends all vote for you to keep it up, in which case, carry on). If you're sending emails, texts, or participating in an online meeting in a professional context, write and speak as you would in the workplace, with a tone of respect and courtesy. Make sure your emails are easy to read and include information relevant to the subject at hand. Adopt a formal or semi-formal tone and address colleagues and coworkers as you normally would in the office.

For personal communications, you can adopt a more informal tone. Model your texts and emails after how you would normally speak to friends and family. Maintaining a positive tone is helpful during this time where many are impacted by social distancing measures. A few cheerful emoticons can keep the mood bright and friendly.

6. Responding Meaningfully

Work your empathy muscles and respond in a way that shows you care. If you receive an email from a friend who is going through a hard time, now is not the time to fill your reply with a cloud of festive happy face emojis. Devoting some time to understanding what your loved one is going through can help you respond in a caring and respectful manner.

7. Becoming Comfortable with Your Own Company

Being a good friend also means taking care of yourself. Relying on others to make you happy can put unnecessary pressure on them and add strain to a close relationship. Though it's hard to stay in isolation day after day in these uncertain times, learning how to build a relationship with yourself is a valuable exercise.

This is easier said than done, of course.

8. Being Open To Receive Feedback and Guidance

As in any relationship, professional or personal, there is a call for giving and receiving feedback and being open to guidance when necessary. If you're new to the world of digital communication, ask for feedback from friends and family as to how to improve communications between you. You can ask the same of work colleagues in a professional tone, reaching out and asking for constructive comments as to how to make online meetings and conferences more productive.

Being open to guidance can mean researching different options and tools of communication. If texting is too casual for your tastes, try emailing instead. If you're having connection problems with FaceTime, see what Google Duo has to offer[27].

4.4 Digital Content – Introduction

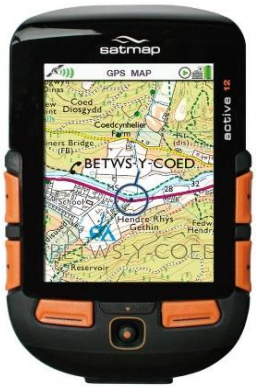
Figure 12 ***Digital Content***[28]

Digital content is any content (data or information) that exists in the digital form.

Also known as digital media, digital content is stored on digital or analog storage in specific formats. Forms of digital content include information that is digitally broadcast, streamed, or contained in computer files.

Narrow view - digital content includes popular types of media, while a broader approach considers any type of digital information (e. g. digitally updated weather forecasts, GPS maps, and so on) as digital content.

[27] https://vplegacies.com/effective-communication-online/
[28] https://medium.com/tag/content/archive/2018/01/05



Digital content has increased as more households have accessed the Internet. Expanded access has made it easier for people to receive their news and watch TV online, challenging the popularity of traditional platforms. Increased access to the Internet has also led to the mass publication of digital content through individuals in the form of eBooks, blogs posts, and even Facebook posts, Instagram, etc..

Tips for Digital Content Creation

Digital content creation is the process of generating topic ideas that appeal to your audience and then creating written or visual content around those topics. It is about making information and your expertise obvious to anyone consuming your content (https://www.quora.com/What-is-digital-content-creation).

Motivation to share the content - there is a science behind what motivates users to share digital content. Researchers have discovered a number of psychological triggers that inspire people to engage in online activities, and here are some of the most important ones:

- ✓ Social Approval: People love to express their attitudes and receive *affirmative feedback* from their circle of friends and acquaintances. Sharing content is a way to express one's personality to a group.
- ✓ Communication: Humans are social beings. We all want to nurture relationships with other people, and digital content enables us to do this more easily and frequently.
- ✓ Support Ideas: Social media is often used to signal support for ideas, political views and personal beliefs; in this way, users connect with a greater, altruistic good.
- ✓ Entertainment: At the end of the day, plenty of people use social media to wind down. Entertaining content includes humor, memes, videos, music, and more.

There are twelve tips to make social media content more shareable:

1. Create High-Quality Content - it is the most obvious point, and it is, but it's also forgotten too often. There are no shortcuts: shareable content is always high-quality content. If you focus on superficial topics and don't invest enough time into research or content creation, you cannot expect your followers to become interested and engaged. This is one reason why long-form content is doing better than ever.

Content development can take time and effort, so if you need professional help, here are some simple resources:

- ✓ Blog Title Generator: This tool will show you the list of the most relevant topics in any given niche.
- ✓ Headline Analyzer: Headline is the first thing that your readers notice and you have to come up with a catchy and intriguing solution. Headline Analyzer will tell you if you've succeeded.
- ✓ Essayontime: If you decide that serious content creation is out of your reach, you can always ask for help from this expert writing service.

2. Use Smart Structuring - Internet users read very quickly, and nothing will turn them off more than a "wall of text". Format your content intelligently by using numbered lists, bullet points and headers to easily highlight key information points.

3. Add Value to Users' Lives - Informative content is good, but if your audience can't put your words in practice then they will not benefit from what you publish. A primary goal of content is to solve users' problems and show how to overcome them; this will not only build brand loyalty, but it will keep them coming back for more. As long as the content you create is genuinely helpful, it's also certain to be passed around.

4. Keep Your Audience in Mind - before ever creating or sharing content, think about your audience: ask yourself if it's something they would like to see and share with their friends. Once you have some ideas, you can even poll your audience to generate comments and perhaps initiate debate. This not only creates engagement, but gives you special insight into what they want.

5. Create Infographics - infographics are informative but easy to understand, because they come in the form of images, they are convenient for the majority of Internet users who mostly share visual content on social media. Using tools like Piktochart, you don't even need the knowledge of a graphic designer to create a reasonably high quality infographic. The most important thing is to use your business expertise and data to create something your audience will find valuable.

6. Trigger Emotions - some of the most successful marketing campaigns went viral because they sparked strong emotional reactions among users. A lot of studies have proven that emotions

like happiness, anger, or sorrow have the power to engage people and make them share digital content. Do you remember the #ItCanWait campaign? Study how AT&T used narrative, art and user engagement to skyrocket this public safety campaign. Be careful not to co-opt causes that are unrelated to your business, since insincerity can backfire. But when you see an opportunity to contribute, do it well.

7. Remember the good old times - talking about emotions, never forget nostalgia. Users universally enjoy content that hearkens back to old memories, and if you analyze your audience precisely, you can get an easy target for what will appeal to them. Consider this 90s themed commercial by Microsoft, aimed at Millennials to promote its Internet Explorer web browser (and be sure to notice the tremendously positive response it elicited):

8. Offer Incentives - people love free stuff. It's a fact that you can occasionally use to boost interest in your products or services. Frequently social media pages will offer a giveaway based on a random drawing, and to enter the drawing users are simply asked to share, like, or follow a page. This can create a big ripple effect that more than compensates for the investment in a reward.

9. Exploit Trendy Topics - staying up to date with trendy topics is obligatory for all marketers. You should always follow the latest industry news, and use them to create shareable content when appropriate. Consider how this Norwegian Airlines commercial provoked positive reactions by responding to celebrity news surrounding Brad Pitt.

10. Organize Contests - contests are a great way to engage your audience and inspire them to share your content. Users love to compete and they usually do it with their friends and colleagues, which is the main sharing motive for them. All it takes is a nice idea and a little bit of budget to launch the contest – just take a look at the KFC football challenge.

11. Be Funny - your business is serious but your content doesn't have to be. On the contrary, funny posts, images, and videos grab the users' attention and promise you a fair portion of shares, so don't run away from it.

12. Use Video Content - video is quickly becoming the dominant form of online content, and some studies even say that video content will make up 80% of all Internet traffic by 2018. As a result, you have to embrace video as part of your content strategy. This is also why Twitter – once known as the photo-sharing network – added video to its portfolio. This kind of content has a big potential to go viral, just like this Nike video did[29].

[29] https://www.onlinemarketinginstitute.org/blog/2017/10/12-tips-creating-shareable-social-media-content/

4.5 Safety and Problem Solving in Online Interaction

According to EC DigComp Framework the following aspects have to be covered by safety and protection: the device, the data and digital identity, health and the environment. While covering the problem-solving component: technical issues, expression of needs and identifying technological responses, the usage of digital tools and identifying digital competence gaps[30].

Stay Safe in a Digital World

Internet safety or **online safety** or **cyber safety** or **E-Safety** is trying to be safe on the internet and is the act of maximizing a user's awareness of personal safety and security risks to private information and property associated with using the internet, and the self-protection from computer crime.

As the number of internet users continues to grow worldwide, internets, governments and organizations have expressed concerns about the safety of people using the Internet.

Safer Internet Day is celebrated worldwide in February to raise awareness about internet safety. In the UK the Get Safe Online campaign has received sponsorship from government agency Serious Organized Crime Agency (SOCA) and major Internet companies such as Microsoft and eBay.

What does it mean to be safe online? Safe during online interaction?

There a lot of suggestions to keep safe online, but the key tips include the following:

Figure 13 **Safe Online**

[30] https://techboomers.com/guide-to-digital-competence

Cybercrime – Types, Protection Means

There several points that have to be taken into consideration to keep safe during online interaction:

Interacting with old and new friends

- ✓ Be kind online. It's OK to disagree, but don't be disagreeable.
- ✓ If you get together with someone you first met online, have the first meeting in a public place.
- ✓ Know how to report abuse or block anyone who bothers you and others on social media.
- ✓ Be weary of anyone who says you or a family member owes them money, unless you are sure they are legitimate.
- ✓ Be very cautious before sharing intimate photos with anyone, even someone you trust. A friend can become an ex-friend and once an image is online, it may be impossible to have it removed.
- ✓ Be cautious about sarcasm and humor. Something that may be funny in person, could be misinterpreted online

Security and passwords

- ✓ Use strong and unique passwords (more at **connectsafely.org/passwords**)
- ✓ Don't automatically click on links in emails. They can be fake and lead you to malicious sites. Type in the web address yourself. When in doubt, call the bank or other company that sent you the email.
- ✓ Make sure your phone is locked. Secure your smartphone with a PIN (minimum 4 digit number), password, fingerprint or other method.
- ✓ Don't respond to anyone who tells you your computer is infected with a virus even if they claim they're with Microsoft, Apple or your internet provider.

Shopping, banking, donating and contests

- ✓ If it sounds too good to be true, it's too good to be true. You can't win a contest you didn't enter and there are no Nigerian princes willing to send you money.
- ✓ Only shop at reputable online merchants. When in doubt, ask around.
- ✓ Never send cash or wire money, Use credit cards if possible, otherwise debit cards or legitimate payment services like Paypal.
- ✓ When shopping or banking look for secure sites where the web address starts with HTTPS. The "s" stands for "secure.
- ✓ Do some research before donating online to make sure the charity is legitimate and that the money is going to the right place.
- ✓ Never give out your social security number, medicare number or any other identification unless you're sure it's necessary, such as applying for credit.

Using apps and unknown websites

- ✓ Read reviews before downloading smartphone apps.
- ✓ Pay attention to what permission smartphone apps ask for before you download or use them.
- ✓ Know and use the privacy settings for any device, app or service you use.
- ✓ Don't provide any personal information on a website unless you are certain it's legitimate and, even then, only if necessary.

Cyberbullying: Simple Tips

- ✓ What people call "bullying" is sometimes an argument between two people. But if someone is repeatedly cruel to you, that's bullying and you mustn't blame yourself. No one deserves to be treated cruelly.
- ✓ Don't respond or retaliate. Sometimes a reaction is exactly what aggressors are looking for because they think it gives them power over you, and you don't want to empower a bully. As for retaliating, getting back at a bully turns you into one – and can turn one mean act into a chain reaction. If you can, remove yourself from the situation. If you can't, sometimes humor disarms or distracts a person from bullying.
- ✓ Save the evidence. The only good news about bullying online or on phones is that it can usually be captured, saved, and shown to someone who can help. You can save that evidence in case things escalate.
- ✓ Tell the person to stop. This is completely up to you – don't do it if you don't feel totally comfortable doing it, because you need to make your position completely clear that you will not stand for this treatment any more.
- ✓ Use available tech tools. Most social media apps and services allow you to block the person. Whether the harassment is in an app, texting, comments or tagged photos, do yourself a favor and block the person. You can also report the problem to the service.
- ✓ Protect your accounts. Don't share your passwords with anyone – even your closest friends, who may not be close forever – and password-protect your phone so no one can use it to impersonate you. You'll find advice at passwords.connectsafely.org.
- ✓ If someone you know is being bullied, take action. Just standing by can empower an aggressor and does nothing to help. The best thing you can do is try to stop the bullying by taking a stand against it. If you can't stop it, support the person being bullied. If the person's a friend, you can listen and see how to help. Consider together whether you should report the bullying. If you're not already friends, even a kind word can help reduce the pain. At the very least, help by not passing along a mean message and not giving positive attention to the person doing the bullying.
- ✓ For more, see ConnectSafely.org/tips-to-help-stop-cyberbullying

Smartphone use

✓ Phones are personal. Letting other people use your phone when you're not around is like letting them have the password to your social network profile. They can impersonate you, which gives them the power to mess with your reputation and relationships. Lock your phone when you're not using it, and use strong and unique passwords for all your apps.

✓ Watch your photos to make sure that they are appropriate. Think about how you and others are dressed and be aware of how anything in the background could embarrass you or give away your privacy. Know how to turn off location sharing on photos and respect other people's privacy by not posting pictures of them without their permission.

✓ The value of presence. If you do a lot of texting, consider the impact that being "elsewhere" might be having on the people around you. Your presence during meals, at parties, in the car, etc. is not only polite, it's a sign of respect and appreciation.

✓ Know what your apps know. Pay attention to any permissions apps request as you install them. If an app asks to access your location, contact list, calendar or messages or to post to your social networking services, consider if the app really needs that information to function. When in doubt, consider withholding permission or not using that app.

✓ Down time is good. Constant texting and talking can affect sleep, concentration, school, and other things that deserve your thought and focus. You need your sleep, and real friends understand there are times you just need to turn off the phone.

✓ Share location mindfully. A growing number of apps allow friends to pinpoint each other's physical location. If you use such a service, do so only with friends you know in person, and get to know the service's privacy features.

✓ Have a conversation (not a lecture) with your kids about smartphone use. Consider drawing up a family cellphone contract and talk with your children about why each point is important (there's a sample contract at ConnectSafely.org/mobile). If you decide to use parental-control apps, discuss them with your children.

✓ Consider parental-control tools. There are actually two major types of parental controls. The first is family rules or guidelines that you establish with your children, and the second is technology tools provided by cellphone companies, smartphone makers and app developers. If you do use technology to monitor or limit your child's phone activities, in most cases it's a good idea to be up front with them and revisit it every now and then as they mature.

✓ Don't text or handle your phone while driving. Texting or even touching your phone while driving is dangerous and illegal in many states. If you must speak on the phone, use a speaker or headset and hands-free controls. Never text, send or read email or post online and if you use your phone for navigation or listening to music or podcasts, set it before you leave or use hands-free voice recognition[31].

[31] https://www.connectsafely.org/safetytips/

What is Digital Age Problem Solving?

Whether it is clean energy, robotics, quantum computing, synthetic biology, telemedicine, AI, or cloud education and NUI software, technology can solve all the biggest problems confronting mankind. The key examples of digital age problem solving:

- ✓ Go Green: Harnessing Technology to Lower Pollution;
- ✓ Think Smart: The Advent of Next Generation Robotics;
- ✓ Additive Manufacturing: From Wearables to Printable Organs and Smart Clothes;
- ✓ AI: When a Computer Can Learn on the Job;
- ✓ Distributed Manufacturing- Factory at Your Doorstep;
- ✓ Sense and Avoid Drones: Innovation with Numerous Applications;
- ✓ Neuromorphic Technology: Computer Chips which can Mimic the Human Brain;
- ✓ Mobile Wallets: Leave Your Purse Behind;
- ✓ Evolving Video Format: From Betamax to Blu-Ray;
- ✓ Redefining Communication: Emails, IM and Mobile Phones;
- ✓ Word Power: From Typewriters to Word Processors;
- ✓ Making the Globe Smaller: Travel Right, Smart Flights;
- ✓ Technology, the Deal Maker: Revitalizing Small Businesses;
- ✓ Taking Your Business to Cloud Nine: CRM and Instant Responses';
- ✓ Technology and Portability: Mobile Apps on the Go;
- ✓ Technology in a Business Organization: Optimizing Performance;
- ✓ Solving the World's Problems One by One: Technology on the Move;
- ✓ Innovations Across Urban Infrastructure: SMART Cities Pave the Way for Better Living;
- ✓ Revolution in Technology: Moulding Lives, Bringing Change;
- ✓ Winning the Hunger Games: Technology Provides Solutions for Food Scarcity;
- ✓ Cutting Down on Water Shortage: Technology Makes Every Drop Count;
- ✓ Sustainable Energy: Big Technology Breakthrough.

Using technology to solve problems does not involve "thinking outside the box." It involves thinking from a different box, one that harnesses knowledge to bring about a radical change. Technology for transformation redefines human life and makes the impossible possible. Small technologies can solve big problems[32].

[32] https://www.educba.com/how-to-solve-problems-with-technology/

Creating Solutions

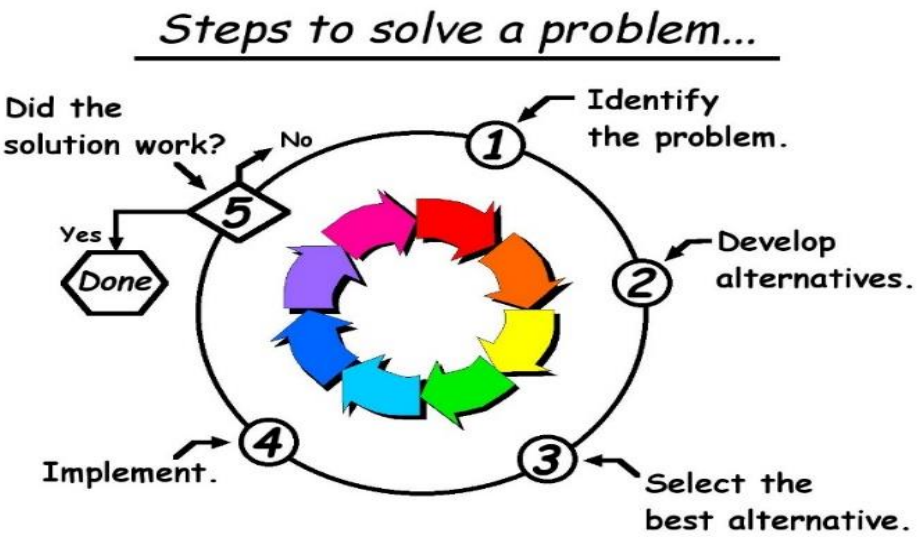


Figure 14 **Problem-solving**

Practical Application of Problem –solving in Online Interactions

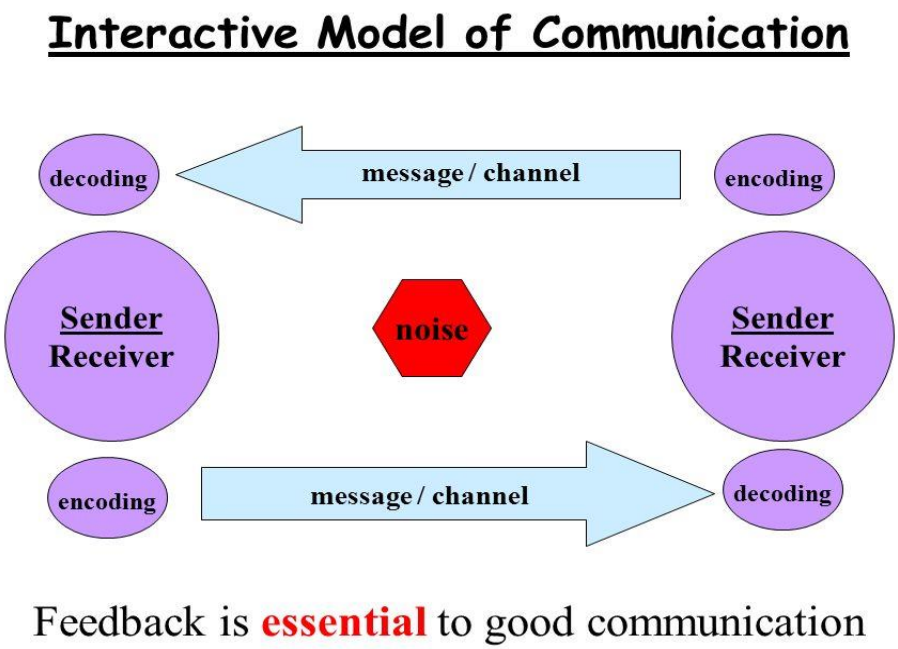


Figure 15 ***Interaction/ Communication***[33]

[33] https://slideplayer.com/slide/8919900/

Nothing is more annoying than dealing with internet problems when you're trying to get your job done. Waiting an hour for a video to download, staring at a blank screen while it loads at a glacial pace, or having an important call with a client drop isn't just frustrating—it can seriously harm your business.

- ✓ The Problem with Access Point Spacing - One of the most obvious causes of slow internet speeds is being too far from the router or access point. This is because the further you are from the router, the more unreliable the connection will be.

The Solution - To fix this problem, simply move closer to the router. If the router is located in a different room or on a different side of the office, try working from that area and see if that fixes the issue. If this is a consistent problem, it's probably a good idea to move your router. Try to position the router higher (for example, up on a shelf), away from other devices that could interfere with its connection, and in a central location in the office without any obstructions. Having objects and materials such as metal, stone, brick, or glass between your computers and the router can interfere with your signal.

- ✓ The Problem with Insecure Networks - If your network isn't secure, anyone within its range could be using your internet signal. This can bog down your network *and* create security risks.

The Solution - A simple way to improve your internet speeds and prevent others from leeching off your network without your permission is to increase your network security. There are a few ways to do so, such as disabling your network sharing, adding a strong password to protect your wireless network routers (and sharing it sparingly), and/or installing a firewall to prevent viruses.

- ✓ The Problem with Out-of-Date Software - Having the right hardware won't be helpful if you don't keep it updated.

The Solution - Make sure you are regularly updating the software!

Other problems and solutions at *https://www.availtechsolutions.com/blog/common-internet-problems*.

Additional Resources

• Most common internet problems and solutions https://www.visioneclick.com/blog/common-internet-problems-and- solutions
• Safe online interaction https://www.mbbsoftware.com/Learning/Safe-Online-Communication.aspx
• Steps to become digitally competent https://techboomers.com/guide-to-digital-competence

Module 5. Basic Concepts of Digital Applications

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Adana Alparslan Turkes Science and Technology University

Learning Objectives

By the end of the Learning Unit, trainees will be able to:

- Develop an understanding of Information literacy
- Describe the tools used for collaborative learning
- Develop an understanding of media literacy
- Develop an awareness of personal internet security
- Use internet resources efficiently
- Have a more thorough understanding of way to protect their information on websites and mobile apps
- Be able to use subject-specific search engines
- Gain insight into using digital resources to be a lifelong learner
- Engage in collaborative online learning activities
- Apply the website evaluation criteria to a site to determine trustworthiness and credibility
- Interpret what online personal branding is and why it is important
- Know how to build an online curriculum vitae
- Develop an understanding of using search engines, job boards and social/professional networking sites to apply for jobs online
- Describe the main tenets of doing an effective online job search

Basic Concepts (Key Words)

- Information Literacy
- ICT
- Digital Literacy
- 21st Century Skills
- Lifelong Learning
- Literacy in a Digital World
- Processing Information
- Hardware and Software
- Online Job Search
- Online Recruitment
- Labour Market
- Job Alerts
- Scam Job Ads
- Professional Development
- Professional (Personal) Learning Network (PLN)
- Online Personal Branding
- Social Bookmarking
- Job Boards
- Professional Networking
- Online Curriculum Vitae
- Job Search Tips
- Media Literacy
- Mobile Applications
- Social Networking
- Subject-Specific Search Engines
- Personal Online Security
- Online Collaboration
- Synchronous Learning
- Asynchronous Learning
- Learner Types
- The R2D2 Model
- RSS Feeds
- MOOCs

Preliminary Notes

Digital Skills in the 21st Century

It is clear that the needs of adults of 1990s are not the same with those of 2020s. Strikingly, the needs of adults of 2015 are not the same as the needs of today's adults. Robotics, artificial intelligence, virtual reality, cloud computing and even the culture of rapid obsolescence affect what individuals need and how they do something. In this ever-changing world, both young and adult learners are expected to have some skills. For example, the COVID-19 pandemic caused schools to terminate face-to-face classes and globally over one billion students suddenly found themselves out of their classrooms. As a result, teaching has to adapt to this sudden change, so teaching was undertaken remotely by using digital platforms. All in a sudden, school administrators and numerous teachers had to look for ways to teach online. Both teachers who were ready to teach via online educational technologies and teachers who had no previous experience of teaching online were in the same situation. Teachers who normally teach in laboratories were expected to respond proactively to this change. All in all, this transformation resulted in improvised solutions by teachers. This was a lesson about what could be expected from the people of the 21st century.

21st century skills is a term that everyone knows to some extent, yet no one seems completely sure what exactly it means. Or rather, everyone interprets it in a different way. However, most people seem to agree that 21st century skills are those which are or will be needed to be successful not only at work but also in personal life in today's world. The term '21st-century skills' is often used to refer to some core competencies such as collaboration, digital literacy, critical thinking, and problem-solving. The term '21st century skills' refers to a wide set of knowledge and skills that are believed to be immensely important to success in the Information Age that we live in. Generally speaking, 21st century skills can be applied in all educational, professional and civic settings throughout an individual's life.

While the specific skills are considered to be '21st century skills', it will be useful to present them as three groups, namely learning skills, literacy skills, and career and life skills. This categorisation can slightly vary and does not reflect a worldwide consensus. Learning skills include critical thinking, creativity, collaboration and communication, which have been identified as essential for successfully adapting to modern work environments. Literacy skills encompass information, media and technology literacy, so they focus on understanding figures, evaluating a source's credibility and understanding the machines and computer networks that we rely upon today.

Life skills cover flexibility, leadership, initiative, productivity and social skills. These skills help people to maintain efficiency and network with others.

In business settings, critical thinking means finding solutions to problems. Creativity can be considered as the ability to think outside the box. Collaboration means working together in teams. Communication refers to the generation of meaning through exchanges using a range of contemporary tools. Technological literacy means knowledge about what technology is, how it works, what purposes it can serve, and how it can be used efficiently and effectively to achieve specific goals. Information literacy means the ability to evaluate information across a range of media; recognize when information is needed, knowledge necessary to know when information is needed to help solve a problem or make a decision, how to articulate that information need in searchable terms and language, then search efficiently for the information, retrieve the information and interpret it properly. Media literacy is the ability to access, analyse, evaluate and create media in a variety of forms. Flexibility refers to a person's ability to change his actions and take steps to adapt to changing circumstances. A 21st century leader is expected to use interpersonal and problem-solving skills to influence and guide strong sides of others to accomplish a common goal. A sense of initiative means creativity, innovation and risk-taking together with ability to plan and manage projects to accomplish a common goal. Social skills refer to the skills needed to interact effectively with others, especially when working with a diverse group of people.

Figure 1. 21st Century Skills

In the broad sense literacy means the ability to read, write and use numeracy in at least one method of writing. In the present century, literacy demands have changed in parallel to changes in technology. The rate at which technology improves makes things what used to take hours in the past take seconds today. It's amazing to see things will only continue to improve every passing day. In order to be literate in today's media-rich environments, everyone needs to develop knowledge, approach and a wide range of critical thinking, communication and information management skills. Therefore, there is a critical need to conceptualise information literacy, and digital literacy beyond the simple notion related to the use of computers and the Internet.

Information Literacy

Over the last two decades, ICTs have become increasingly more integral part of our everyday lives and they have brought about some fundamental changes in the way people learn, communicate, work, communicate and obtain information to achieve our personal and professional goals, and also the way we have access to public services and education and entertainment. Importantly, a vast range of services, such as banking, citizenship and management processes are transferred online. A digitized bank or government is more labour-saving and cost efficient. But this also means that individuals should know more about technologies and be able to use ICTs to search, evaluate, create, and communicate information. This not only means that individuals should not only have cognitive and technical skills but also be open to lifelong learning because the technological developments occur so rapidly in today's world. The biggest benefit here, people who can understand and effectively use digital sources and facilities are significantly empowered and have many advantages in terms of educational opportunities, professional development, employment prospects, civic participation and many other aspects of their personal and social life. If we need to give a few examples of areas, public and social services, online shopping, online banking and social networking are worth mentioning (Jimoyiannis, 2015).

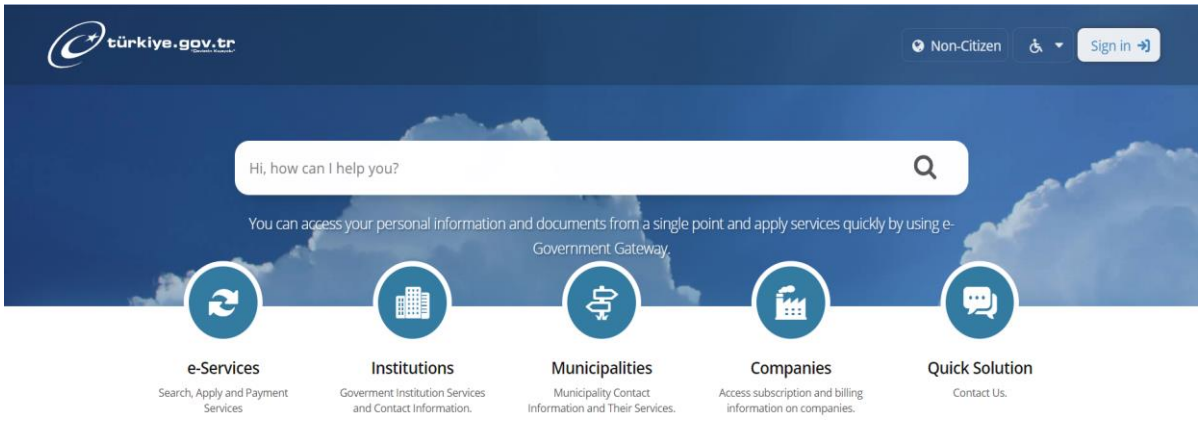


Figure 2. A screenshot of e-Government Gateway

Information literacy means the process of recognising information need, retrieving, evaluating, using and disseminating of information to acquire or extend knowledge. The concept of information literacy includes both the ICT and the information (re)sources concept and persons are considered as information systems that retrieve, evaluate, process and disseminate information to make decisions for self-development. ICT refers to technologies that provide access to information through telecommunications. Even though there is no single, universal definition of ICT, the term is generally accepted to mean all devices, networking components, applications and systems that allow people and organizations to interact in the digital world.

Figure 3. Personal development

Information literacy relates to information in all its forms: not just print, but also digital content, data, images and the spoken word. Information literacy is associated and overlaps with other literacies, including specifically digital literacy, academic literacy and media literacy. It is not a stand-alone concept, and is aligned with other areas of knowledge and understanding.

Information literacy refers to a set of characteristics that transform an ordinary student into a "wise information consumer" and "lifelong learner." Information literacy isn't just something you "do" in college, rather "information literate" is something you become, via your coursework and personal experiences and interactions with information.

Information literacy is:

- The ability to articulate one's information need
- The ability to identify, locate and access appropriate sources of information to meet the information need
- The ability to effectively use information resources, regardless of format
- The ability to critically and ethically apply the information
- The ability to determine if the need has been adequately met

5.1 Digital Literacy

The field of adult education, from the perspectives of practice, policy, and research, recognizes that digital literacy skills are fundamental to participation in society. Digital technology is integrated into our lives. As technology is evolving rapidly, we want the population to be fully competent, confident and capable in its use in the workplace. Excellent digital capabilities include a positive attitude towards technology and innovation. However, evidence suggests that to achieve this, we need to develop a digitally literate society for today and the future. Then, what is this digital literacy?

Regular literacy is offline and involves reading, writing, grammar and syntax. Digital literacy, on the other hand, refers to the capabilities which fit a person for living and working in a digital society, so digital literacy requires not only cognitive but also technical skills. Digital literacy includes the ability to find and use information but it is not limited with this. It goes beyond information literacy to include communication, collaboration and teamwork, social awareness in the digital environment, understanding of e-safety and creation of new information.

Digital Literacy may be about an individual's ability to read and write online or using technology such as tablet computers, smartphones and e-readers, but it actually means much more than that. With the impact of social media, digital skills now include a broad range of skills from downloading content from Cloud Storage to sharing things on Instagram. Today, workers are expected to have a wide range of digital skills, and it is anticipated that in the next three years 85 percent of the workforce will require at least basic computer skills, such as sending email or using some company software. People who lack digital literacy may soon be in a disadvantaged position. Improving your digital literacy skills will help to improve your productivity and will also help you in your workplace to ensure the company you are working to be competitive and productive.

It is now time to look at how computers connect people, businesses and processes all over the world. Many works in our daily life are done through computers. Multi-user computers are designed to serve groups of people all at a time, from a small office to a huge international enterprise. A server is a computer that is dedicated to serving and supporting a group of network users and their information needs. There are different kinds of servers, varying greatly in size and power and performing different functions. A computer includes both hardware and software. Computer hardware is any physical device used in or with your machine, whereas software is a collection of codes installed onto your computer's hard drive. For instance, the computer monitors you're currently using to read this text and the mouse you're using to navigate this web page is computer hardware. The Internet browser that allowed you to visit this page and the operating system that the browser is running on is considered software. Without software, the hardware, no matter how expensive it is, would be a useless piece of metal and plastic.

Figure 4. A server room

The hardware has a small amount of software permanently built into it on a chip, just enough to help it start up when you apply power to it. This basic start-up software is called the Basic Input Output System, or BIOS. The operating system manages all the computer's activities after the BIOS has finished its start-up routine. It provides the user interface, runs applications, manages file storage, and communicates with the hardware on your behalf. Utility programs work in partnership with the operating system to keep the computer healthy and running well. Some utilities come with the operating system, and others are purchased. Last but not least, we get to the reason you own a computer: the applications. An application is software that is designed to help you do something productive or fun — something of interest to a human user.

The two most popular desktop operating systems in Europe are Windows by Microsoft and MacOS by Apple Inc. As for the market share of mobile operating systems, Google's Android maintains its position as the leading system. It is followed by Apple's IOS.

Misinformation on the Web

Whether researching for an assignment or personal curiosity the internet can be a very quick and rewarding fountain of information; it can also be a challenging area of personal opinions and misinformation. All information you gather from the internet should be given scrutiny, printed materials like those collected in a library usually go through an evaluative and editorial process before they are published and collected in libraries.

In the past, finding information was an arduous process. With the invention of the Internet and devices that can easily access this information, but the Internet has also removed the restrictions and editorial process typical for print materials, so anyone can publish on the web. Despite finding answers to your questions can take a few seconds only, not every information on the Web is reliable. Over one billion websites exist, so knowing ways to conduct an effective search is important and usually the first step. After accessing a website, it is important to determine the credibility of the content because not all website content developers are equally trustworthy. People of all ages should be cautious about false information as the risk of believing false internet content can lead to serious consequences.

No matter you can call it fake news or false information, misinformation seems to be increasing on the Web. Misinformation is defined as incorrect or misleading information. It is spread, regardless of intent to mislead. Disinformation, on the other hand, is false or misleading

information that is spread deliberately to deceive. Therefore, disinformation is deliberately created to harm a specific person, a specific group of people, company or country.

Misinformation can be better understood if we look at some web content to study. For example, let's have a look at the following picture. How would you feel if climate activists left a park in so much rubbish and plastics after their protest? Would you feel angry?

Figure 5. An example of misinformation

After seeing this photograph on Facebook, many people got angry with the climate protesters. Contrary the claims, climate protesters did not throw away trash in the park. As a matter of fact, the so-called protesters were never in that park. Furthermore, the claimed picture was not even taken in the claimed park and even the location of the original picture was different than the country people had claimed on Facebook.

Amidst the COVID-19 pandemic, especially in the first months after the outbreak of the virus, people were desperate for information and many people were craving for information about where the virus came from. Soon people learned that the virus was spreading rapidly across the world, so did the misinformation. For example, many social media posts suddenly appeared, claiming Nobel Prize winner Professor Honjo from Japan said that the virus was "not natural".

Figure 6. Fake news

Professor Honjo reportedly said that “I have done 40 years of research on animals and viruses. It is not natural. It is manufactured.” However, soon after that Professor Honjo made a statement saying “I am greatly saddened that my name and that of Kyoto University have been used to spread false accusations and misinformation.”

Figure 7. Tasaku Honjo’s statement on Kyoto University’s official website

What misinformation and disinformation have in common is that information is not true. However, some kinds of fake news have some truth, but they aren't completely accurate. I am sure you have heard or seen similar examples such as journalists quoting only some part of a person's statement, thereby giving a false impression of the intended meaning. What can you do to spot misinformation? Here are a few useful tips:

- If you see something which makes you feel angry or disgusted, you should be careful and apply critical thinking principles.
- If you come across a story from a source that is secondary or that you've never heard of before, check how reliable the source is.
- Don't trust all the images you see online. It is much easier today for average internet users to create fake images. Indeed, research shows that only one in two people can spot fake images. To make things worse, people can use %100 accurate images in the wrong context to mislead others. You can use 'reverse image search' websites to understand whether the image has been altered.
- Use fact-checking websites. There are various websites that verify news stories.
- Don't share someone else's post before verifying the information.

Exercise

There is so much information on the web and it can be really difficult to know what's real and what's fake, so we should use some resources as references for finding real information. Now make a search for a latest news on a search engine or maybe on your Twitter account and click on one of the first links which has a controversial title.

1. First, check the story. Some messages are meant to be a joke or an ad. Check the story briefly to see if it is one of them. Check if you can find the same story somewhere else.

2. Second, check the author – is it someone's opinion or a fact? Real news will most likely have a link to the writer's details. Check the writer's Twitter or other professional account and if it is a confirmed account. Look for a blue check mark near their name on Facebook or Twitter. This means that is a verified account and the writer is who he/she says he/she is.

3. Third, check the website – check and try to find spelling or grammar mistakes. What's the URL? Check the address bar at the top – most trusted URLs end with ".com", ".gov", ".org", ".mil" and ".edu" suffixes.

4. **Check the image.** It takes just seconds to search a photo on a web browser. For example, in Chrome, you can right-click the suspicious image, then click on "Search for image." In so doing, this will help you to understand if the image is fake or real. Also you can understand if they are using a real picture for a different content.

5. Check the date of the news – See if it is an old story or a recent one? It could be outdated or a copy of something that happened years ago.

(BBC, 2019)

Over the last two decades, ICTs have become increasingly embedded in our daily lives and have brought about sudden changes in society by radically changing the way people chat, collaborate, communicate, get to information and do work-related things besides education and entertainment. Therefore, 21st century, digital and information literacies are all important for adult learners to actively take part and contribute to our society in this information age. The issues covered in this part are believed to help participating adults become confident digital learners with more awareness of effective communication and critical thinking. The COVID-19 pandemic has acknowledged the importance of fundamental digital skills, collaboration, communication and critical thinking. We have come to the realization that not every member of our society has full access to smart devices, computers and internet but also we know now that some members of our society cannot make use of these technologies despite owning them.

5.2 Media Literacy

Figure 8. Media

Media Literacy is an important part of the things done in online settings. The word media refers to various means of communication. Media helps to connect people from various geographical locations, near or far. All media is created to affect human behavior through communication. In this regard, if one wants to understand the social and individual effects of media, s/he needs to understand media and communications psychology.

The media sources include so many things you can encounter in daily life such as newspaper and magazine articles, published photographs, recordings of television and radio broadcasts, sheet music and music recorded for mass distribution, advertisements, books, and magazines. There are three main types of news media: print media, broadcast media, and the Internet.

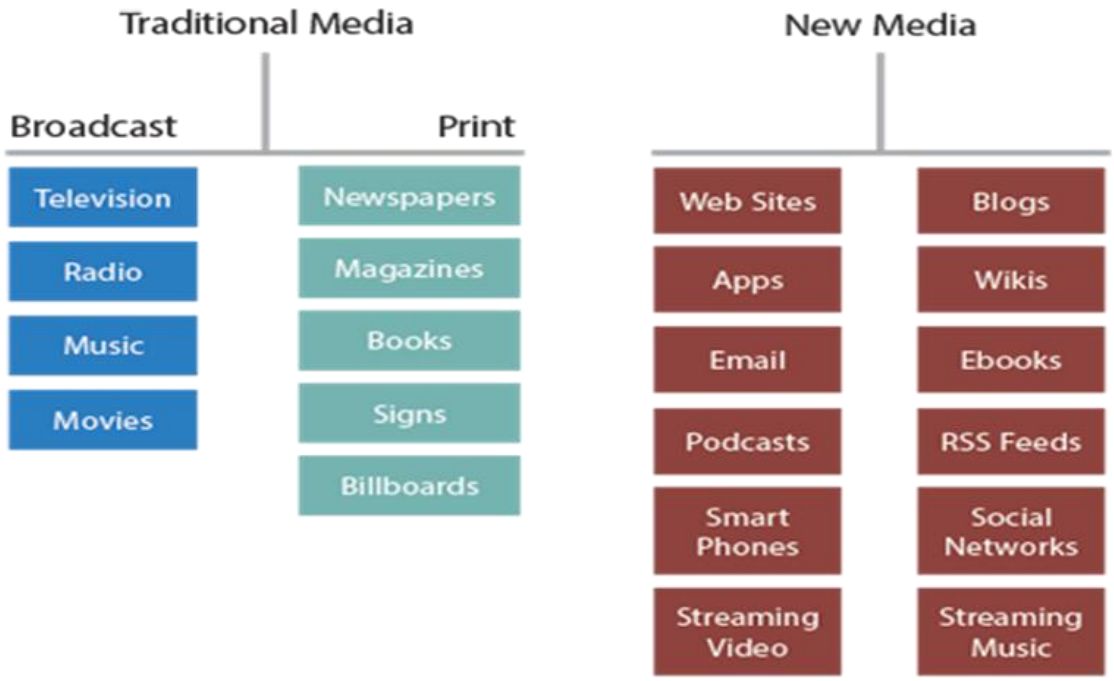


Figure 9. Types of media

The internet itself is a source of media. It is arguably one of the most effective tools in media for communication tools. By some measures, if you began reading the Internet today and continued for 24 hours a day and 7 days a week, it would take you 57,000 years to reach the end. So how do we effectively filter, select, organize, save, and use information gathered from media sources?

Figure 10. Media Messages

Every day, we are bombarded with media messages from various sources. Although we do need the information in these messages, sometimes the images and messages manipulate the reality in various ways. Individuals need to be aware of media literacy to help them to deal with this load. Media messages convey ideological messages about values, power, and authority. The messages conveyed could either be the results of conscious decisions or unconscious biases and unquestioned assumptions. In both cases, the messages affect the way we think and believe. To become wiser consumers of media and responsible producers of media, we should be aware of "media literacy".

Media Literacy

If someone is literate, s/he first recognizes letters, then identifies words, and understands what those words mean. Then a reader becomes a writer as well. A literate person knows how to read and write. The formal definition of media literacy was made by the US is a succinct sentence hammered out by participants at the 1992 Aspen Media Literacy Leadership Institute:

"Media Literacy is the ability to access, analyze, evaluate and create media in a variety of forms". (Christ & Potter 1998, 7)

All media messages are created by someone, and they are created for a reason. Media literacy is based on understanding that reason. The goal of media literacy is to help people become sophisticated citizens rather than sophisticated consumers. To become media literate is to *learn to raise the right questions* about what you are watching, reading or listening to. Today's people

need to become more efficient at *filtering what they see and hear*. With so much media, people are exposed to every day, teaching media literacy is more important than ever before.

Any media you are exposed to should go through the five questions illustrated in Figure 4 below. By asking these questions for any messages you see, or read and hear, you become more media literate. This helps you to better formulate your own opinions.

Keywords:	5 Key Questions	5 Key Concepts
Authorship	Who created this message?	All messages are 'constructed.'
Format	What creative techniques are used to attract my attention?	Media messages are constructed using a creative language with its own rules.
Audience	How might different people understand this message differently than me?	Different people experience the same media message differently.
Content	What lifestyles, values and points of view are represented in, or omitted from, this message?	Media have embedded values and points of view.
Purpose	Why is this message being sent?	Most media messages are organized to gain profit and/or power.

Figure 11. Five Key Questions

Below you can find further questions to ask while consuming media:

1. Who created the message I am reading? Is it a company? Is it an individual?

2. Why was it created? Does it aim to inform about something happened in the world (for example, a news story)? Does it aim to change your mind or behavior (an opinion essay or a how-to)? Does it aim to make you laugh (a funny meme)? Does it aim to get you to buy something (an ad)?

3. Who is it for? Is it for children? Is it for adults? Is it for a group of people with common interest or view?

4. What techniques are used to make it believable? Are there quotes from an expert? Any statistics from a reputable source? Any evidence?

5. Are there any details that are left out? Why do you think is that?

6. How did you feel when you read the message? Do you think others feel the same?

Thinking critically about the messages in media helps you better analyze them before you share and produce your own media about them. A study from the Massachusetts Institute of Technology (MIT) found that false news spreads faster, farther, and deeper than real news on Twitter.

What to do to prevent the spread of false news or inaccurate information?

Here are some of the things that can be done to prevent the spread of inaccurate information:

1. read past the headline,

2. check the date and author credentials,

3. Gauge the tone and language, and identify biases.
4. Check from at least one other source that states the same thing. Different sources report different details in varying levels of depth,
5. Question Numbers and Figures. Judging the math behind the message is crucial.
6. Be careful about the difference between credible and non-credible language, both written and spoken. People are likely to believe the things they read or hear when it's written in language that sounds flowery or academic.

Media Literacy and Older Adults

Studies show that older adults use digital technologies and media less often and in a different way than younger people. Some of them are even internet non-users, which could make them vulnerable to the lack of ability to understand, analyze, and evaluate media content and the reliability of online news.

To illustrate the importance of the issue, we can give some examples of a current issue, COVID-19, and the news spreading all over the world.

Figure 12. Fake News

False stories spread 10 times faster than real news and they can have threatening effects in society.

Example: Fake News about COVID-19

The US government created the virus.

The Chinese government created the virus.

The virus is all because they want to bring 5G.

Sipping water every 15 minutes stops the virus.

Gargling with saltwater is a cure for COVID-19.

These kinds of messages about any issue come to us through various media sources, particularly social media. However, one must try to avoid misinformation about any issue by watching the following rules.

- Only consume information from reliable resources.
- Print news is usually more reliable than videos. Usually, information given in print form includes links to referenced items.
- Double check before sharing information with others on social media. Do a quick search and spend some time to make sure that the information is accurate.
- Ask an expert you know.

- Read the details and check the information from other similar sources
- Check if your own biases make you believe the information given

Various websites contribute to media literacy by evaluating on the common news. Before sharing any potentially fake news, one can check these websites to confirm. Factcheck.org is one example.

Figure 13. How to spot fake news

Exercise

Watch the video to see how false information spreads:

https://www.youtube.com/watch?v=cSKGa_7XJkg

Find about some fake news on the net about COVID-19 and search about the real evidence.

Choose one of the news below and search whether they are accurate:

- *The US government created the virus.*
- *The Chinese government created the virus.*
- *The virus is created all because they want to bring 5G.*

To help your search, use the following questions:

Check the news pages about it.

Check the name of the website. Is it a well-known source? A government page? A newspaper article?

Is there an author name?

When is it written?

Are there any specific references?

Are there any expert views?

Is the information given written in some other well-known sources as well?

Is it a meme or joke?

Are the headline and the information in the text parallel?

Media literacy has never been this important in an era when people are exposed to so many media messages every second. Some important points to keep in mind are as follows: all media messages are constructed by someone with a purpose in mind and using a creative language with its own rules; the same media message is experienced and interpreted differently by different people; and all media messages are organized to gain profit and/or power. Therefore, individuals with high media literacy levels should be conscious consumers of media.

5.3 Efficient Use of Internet Resources

Websites are places where we can find important information and files. Most of us use them this way or that way, so what is a website? Before answering this question, we should first look into webpages. A webpage is a simple document displayable by a browser. A webpage is a single document on the Internet under a unique URL. In contrast, a webpage is defined as a set of related web pages located under a single domain name, typically produced by a single person or organisation.

Websites

There are some points that can tell us about websites before we even visit them. When evaluating a website there are several things to take into consideration, one of the first things to look at is the URL (Uniform Resource Locator: a protocol for specifying addresses on the Internet) this can often tell you several things about the website, the creator, the audience, the purpose and sometimes even the country of origin. The URL is the address you type in to get to a website. For example if you type in https://www.google.pl/ it will take you Poland's Google Search website but when you type in https://www.google.com.tr this will take you Turkey's Google Search website.

Figure 14. HTML codes

A domain name is like a website's proper name (the part after the www.), businesses and organisations often have a domain name that is their corporate name (for example Microsoft's domain name is Microsoft.com). The domain suffix is the end of the domain name (the .com part) and can help us understand the type of organisation the site is linked to. For example, any commercial enterprise or corporation that has a website will have a domain suffix of .com, which means it is a commercial entity. Popular domain suffixes include ".com," ".net," ".gov," and ".org," but there are dozens of domain suffixes. However, since any entity can register domain names with these suffixes, the domain suffix does not always represent the type of website that uses the domain name. For example, many individuals and organizations register ".com" domain names for non-commercial purposes, since the ".com" domain is the most recognised.

The domain suffix might also give you a clue about the geographic origin of a web site, each country also has a unique domain suffix that is meant to be used for websites within the country. For example, Latvian websites may use the ".lv" domain suffix, Greek websites may use the ".gr" suffix, Italian websites may use the ".it" suffix and Turkish websites may use the ".tr" suffix. These country-based domains, sometimes referred to as "country codes," are also used to specify different versions of an international website. For example, the Italian home page for Google is "www.google.it" instead of www.google.com.

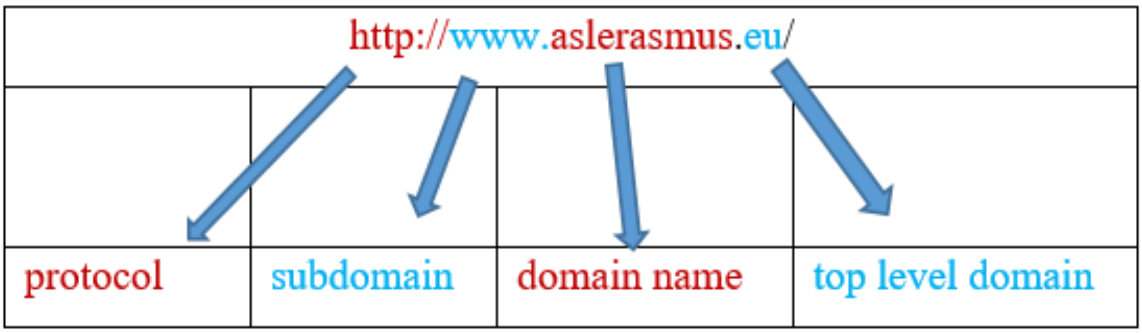


Figure 15. The domain suffixes

A complete list of domain suffixes and their definitions is listed below:

.com = Commercial site. The information provided by commercial interests is generally going to shed a positive light on the product it promotes. While this information might not necessarily be false, you might be getting only part of the picture. Remember, there's a monetary incentive

behind every commercial site in providing you with information, whether it is for good public relations or to sell you a product outright.

.edu = Educational institution. Sites using this domain name are schools ranging from kindergarten to higher education. If you take a look at your school's URL you'll notice that it ends with the domain .edu. Information from sites within this domain must be examined very carefully. If it is from a department or research centre at an educational institution, it can generally be taken as credible.

.gov = Government. If you come across a site with this domain, then you're viewing a government site. The domain name .gov is a sponsored top-level domain in the Domain Name System of the Internet. The name is derived from the word 'government', indicating its restricted use by government entities.

.org = Traditionally a non-profit organization. Organisations such as the International Committee of the Red Cross (https://www.icrc.org) or UNESCO (https://en.unesco.org/) use this domain suffix. Generally, the information in these types of sites is credible and unbiased, but there are examples of organisations that strongly advocate specific points of view over others. Some commercial interests might be the ultimate sponsors of a site with this suffix.

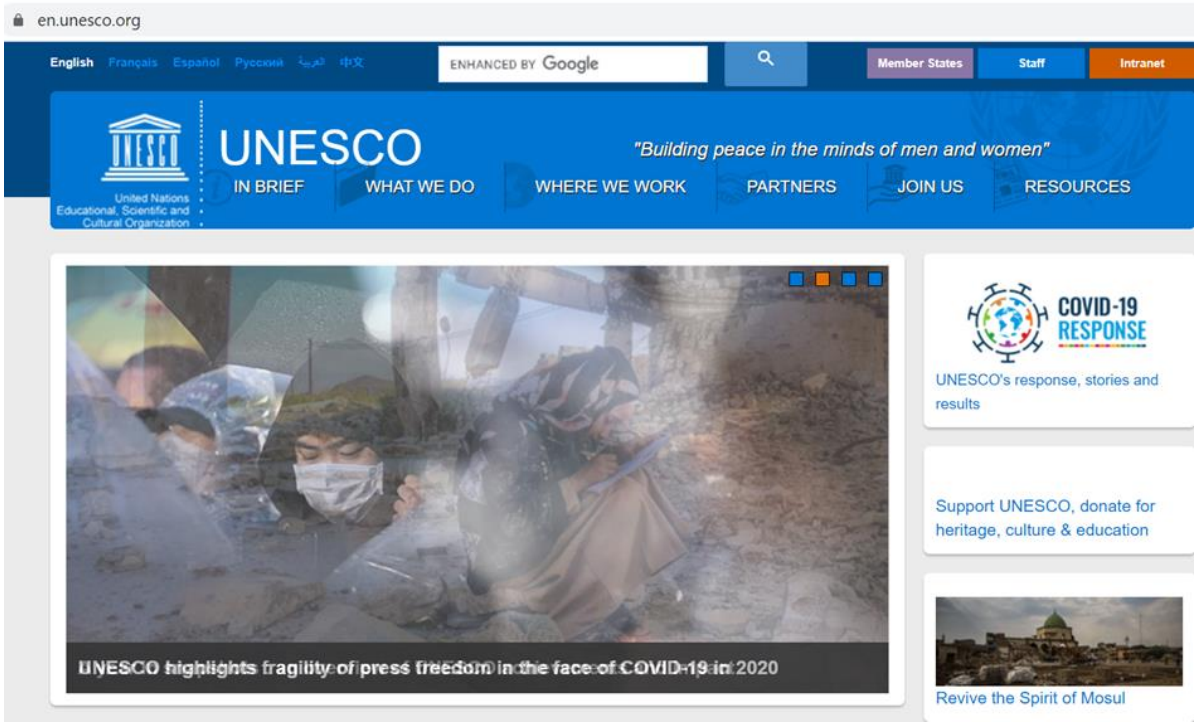


Figure 16. UNESCO website

.net = Network. You might find any kind of site under this domain suffix. It is often used for national or international network company sites. However, it acts as a catch-all for sites that don't fit into any of the preceding domain suffixes. Information from these sites should be given careful scrutiny.

Although there are many sources in printed form, most sources are available online now. Any electronically-retrieved data can be considered as online search, or internet search. However, not everything we find in internet should be considered as reliable sources.

The Internet provides a huge amount of information that causes overload. The information on the Internet is not organized. There are too many web pages related to any topic you want to search for.

The type of messages we access daily come from social media accounts. However, social media posts are generally brief, and the information provided cannot be verified. The messages that are created for promotional purposes contain biased information even when it is shared by the corporate social media accounts.

The internet has much more than this to offer. The optimal use of internet resources is of great importance for any person. However, extracting the exact piece of information you need from the internet is not easy. You should search on relevant materials. Finding the relevant information from the appropriate resources requires clever search from the available internet resources. Here are some tips:

Search engines. Write down your search terms in the box. You can limit the search by country, year, language, etc. and run the search. More detailed search tricks could yield more relevant results.

Subject-specific search engines. They aim to access more relevant results on a particular subject area. The results might involve books, articles, theses, etc. You can either access the full version or more reliable publication details. Some examples are as follows:

- Google Scholar: focuses on search about academic information on the Internet
- Healia: focuses on search about health information

Subscribed resources. Some resources in internet are purchased to access but they provide reliable content on a regular basis. Some databases could also be given as examples.

Mobile applications. A mobile application, most commonly referred to as an app, is a type of application software designed to run on a mobile device, such as a smartphone or tablet computer.

Mobile Applications

Applications are platforms that use the operating system of the computer or a mobile device. A good mobile application can function much quickly than websites. Apps are preferred over websites for a number of reasons. They are faster, they can provide personalized content according to preferences, they enable online and offline access, they provide notifications and updates, they can reduce costs, and they can provide interactive engagement.

There are miscellaneous apps about many topics. There are currently more than 2.9 million apps available in the Google Play Store (Statista). As of June 2020, there were 2.96 million apps published in the Google Play Store. A collection of useful applications to enable optimal use of internet resources can be listed as follows:

Pushbullet: This app connects your laptop with your smartphone, tablet or other devices, which enables to work better together.

Google Dictionary: The app provides the definition of any Word in a small bubble by simply double-clicking on it while reading.

Google Keep: It's an application that helps you set reminders for the things you should do.

Grammarly: The app helps you to correct your spelling and grammar mistakes.

Mixmax: The app available for Gmail and Google Inbox notifies you when an email you sent is read.

MyFitnessPal: The app counts calories and helps you to plan your diet.

Remember the Milk: another to-do app that groups and assigns things to be done.

Mint: The app, which is an online budget planner, helps to track your expenses and income to achieve a better financial future.

Coach.me: It is a community app that help people to connect and motivate each other to stick to new habits.

Figure 17. A mobile application to track individual growth

Calm: The app provides guided meditations and sleep stories to reduce anxiety. The app also aims to increase mindfulness and develop gratitude.

Focus Booster: The app keeps the track of what you need to do and when you do. It allows you to record all your sessions and track your productivity.

Insight Timer: The app is designed for mental health. It has scheduled times for you to sit and relax your time.

Timeneye: It is an app to fix your time management problems. Essentially, you can track how you spend your time by scheduling what you're doing and for how long.

Google Translate: Google's free service instantly translates words, phrases, and web pages between English and over 100 other languages.

Social Network

Social network is of great importance for adults. Adult people's health and perceived well-being are negatively affected if their social network is weak. On the other hand, they can feel better and their quality of life increases if they have and form new ties. Being socially active is believed to prevent depression and strengthen the psychological well-being.

Considering the current limited social gatherings due to the pandemic, one wonders if social networks online could also have similar positive effects. The answer is yes. According to the results of a European study, social media use among the aging community could contribute cognitive capacity, increase a sense of self-competence, and may have a beneficial effect on mental and physical well-being. Seeing people sharing the important or quite ordinary things in their lives could help ageing adults to maintain social networks and live fuller lives. The most common social networking sites are Facebook, Twitter, and Instagram. However, social networking should not be considered as something that is limited to these three only. Here you can find general information about the social network sites on internet.

Facebook: By crossing 500 million users, Facebook has been the most popular social networking site of the world. Once you create an account using an e-mail, the site helps you to browse and join networks in categories such as regions, colleges, workplaces, high schools, etc. You can also pull contacts from a web-based e-mail account.

Twitter: It enables to build your network of contacts, invite others to receive your Tweets, and follow other members' posts. Twitter makes it easy to opt into or out of networks. You can also choose to stop following a specific person's feed.

Instagram: Different from other sites, Instagram emphasizes photo and video sharing via its mobile app. You can take, edit, and publish visual content.

LinkedIn: LinkedIn is a social network for business professionals. It helps people to find a job and connect with potential business partners. It is different from Facebook or Instagram as it does not focus on sharing media like photos, videos, music, etc. The site also allows to give and recommendations from co-workers and bosses. More than 75 million professionals are using LinkedIn.

MySpace: Once you create a profile, you invite friends to join there and search for your friends on already profiled on MySpace. Then these friends become your initial Friend Space. Once the

friendship is confirmed, all the people in your friends' Friend Space become part of your network. Hence, everyone on MySpace is in your Extended Network.

Online Privacy and Security for Adult Learners

Although securing your personal information is important, many people don't bother to protect their personal data or sensitive information. Once a person's personal information is online, it's hard to prevent that information from passing to others. Technically, information on the Web tends to persist indefinitely because the whole system does not work on a centralised principle. The best thing to do is to be cautious about putting your information out there in the first place. According to recent research, one-in-thirteen internet users have experienced web fraud in the past twelve months, but this does not mean it is unavoidable. Internet users may protect their privacy through controlled disclosure of personal information. Before looking at the ways to protect privacy, let's have a look at some terms first.

Password: A password, sometimes called a passcode, is a memorised secret, typically a string of characters, usually used to confirm a user's identity. It is usually a combination of keyboard letters, numbers, and characteristics that must be entered to gain admission into many online services.

Security question: A security question is a form of shared secret used as an authenticator. It is commonly used by banks, websites, social media accounts, and wireless providers as an extra security layer.

Two-factor authentication: Two-factor authentication, sometimes referred to as two-step verification or dual-factor authentication, is a security process in which users provide two different authentication factors to verify themselves. Typically, users are asked to prove their identity by providing information such as an email address and a password. A second factor of authentication such as a phone call, text verification, e-mail verification is then used to add an additional layer of security.

People lock up their bicycles, use locks on cars and security alarm systems on houses to protect what they possess. In a similar way, passwords are designed to protect personal information on digital platforms. Passwords are your way into almost all of your online accounts, from websites to mobile apps, but how do you know whether the passcodes you're using are strong enough against hacking attempts?

Risks associated with using weak passwords include people impersonating you to access your bank account and other financial services, purchase items online, impersonating you in social media networking sites, and accessing private information on your computer. Passwords can be used to log onto a computer, sign into online accounts (e-mail, social networking, shopping, etc.), unlocking a cell phone or tablet, etc. If you have a strong password it can reduce the risk of being hacked and having personal information stolen.Now, enter a current password into a password strength tester: https://www.cscan.org/PasswordStrength/

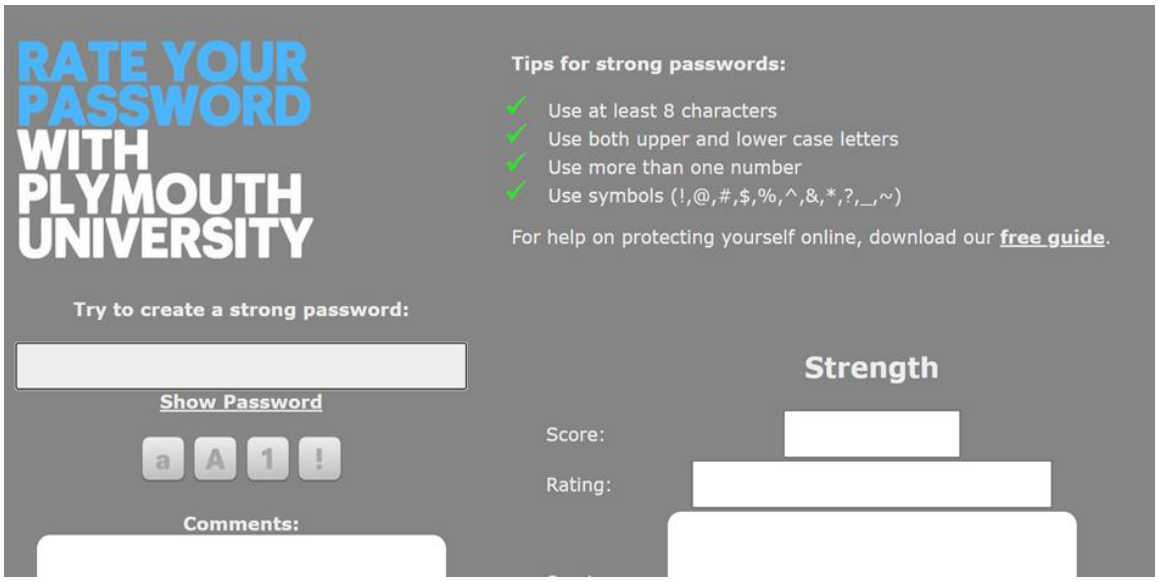


Figure 18. Rate Your Password with Plymouth University

This password strength tester is maintained by the Centre for Security, Communications, and Network Research with the School of Computing, Electronics, and Mathematics at the University of Plymouth in England. It is a trusted password strength testing site. After you enter your password it will make an assessment and give an overall score of strength for your password.

Facilitators should lead a discussion about different strategies for creating and maintaining strong passwords. Many digital platforms set their password requirements, so it is always recommended to check the minimum password requirements before creating a password. If your password is not strong enough here are some tips for you:

- Don’t use your name,
- Don’t use your birthday,
- Don’t use a date,
- Don’t use your place of birth,

- Don’t use your pet’s name,
- Keep it at least 10-character long
- Use lowercase characters
- Use uppercase characters, preferably in the middle of the password,
- Use a mixture of numbers, letters and symbols (for example, ! % ^ * ( ) _ = ? ／ $ &).

Electronic mail (email or e-mail) is a method of exchanging messages between users that use electronic devices. It is the most preferred digital communication method in the world. Email messages are stored on servers and these servers receive, forward, and deliver messages. Email technology is not new and has some technical limitations in terms of web security. Moreover, email is hackers’ favourite route to attacking a target and this is mostly because of the fact that most users don’t bother to make their accounts secure. Fortunately, developers are consistently making some improvements to make this service more secure against rapid and intelligent cyber-attacks. For example, end-to-end encryption ensures that the messages are encrypted on the sender's device and only ever decrypted on the recipient's device. This means servers in between cannot decrypt the message. Another layer of protection is the use of websites with Secure Socket Layer (SSL). Any website with https in its URL is using SSL to keep data you share secure as it travels from your device to the server of the website. SSL provides a way for your computer to guarantee that data it sends to and receives from an SSL-enabled server is encrypted.

Figure 19. Data Encryption

Email spam, also referred to as junk email, is unsolicited messages sent in bulk by spammers. They collect email addresses from customer lists, websites, chat rooms, and social media. Phishing is a targeted attempt to obtain sensitive information, such as usernames, passwords and credit card details, by disguising oneself as a trustworthy entity by contacting via email, social media, and phone calls. Phishing emails often include messages that you have won something or they can demand users to perform specific actions, such as clicking a URL by giving threats to shut down their accounts.

Email security is not the email provider's responsibility only, but everybody's responsibility. When hackers steal our information, there are many possibilities that can happen to our stolen information. Identity fraud, blackmail and fraud are only a few of them. For instance, a hacker or cybercriminal can use our financial information for malicious activities such as performing fraudulent online transactions and transferring money out of our bank accounts. Let's have a look at this list of safety tips for any email user.

- Don't click the "Unsubscribe" link in a spam email. It would only let the spammer know your address is legitimate, which could lead to you receiving more spam.
- If you receive an attachment from someone you don't know, don't open the message and move it to your spam box. Or you may want to delete it immediately.
- Avoid checking your email when you're on public Wi-Fi, such as when you're at a coffee shop, bus station, or an airport.
- Use two-factor authentication on your email account.
- Be sure to log out after you have had to use a public computer.
- Prestigious businesses will never ask for personal information via email. If a message asks for your password, credit card details or social security number, that's a phishing email. Delete the message immediately.
- Use a spam filter.

Exercise

If you have a strong password it can reduce the risk of being hacked and having personal information stolen.

Now, enter a current password into a password strength tester and see if your password is strong enough. https://www.cscan.org/PasswordStrength/

Passwords can be used to log onto a computer, sign into online accounts (e-mail, social networking, shopping, etc.), unlocking a cell phone or tablet, etc. If you have a strong password it can reduce the risk of being hacked and having personal information stolen.

Let's test one of your passwords now. Now, enter a current password into a password strength tester: https://www.cscan.org/PasswordStrength/

Exercise

1. Open the app store or google play store in your cell phone. Write down a key word in line with your interest. For instance,

Health, recipes for cooking, weather, horoscopes, etc.

2. Check how many different apps are suggested.

3. Read their description and decide whether you should download it.

4. Try to learn more about them in the comments section.

5. Start using the app

Exercise

Download a social media application. Facebook or Instagram could be an option. Write down the name of a person you know. Try to find his/her profile information.

This section has presented the ways to effective using internet resources. Internet is expanding rapidly and so are the changes in our everyday lives. Using websites, social media and mobile apps effective probably has never been that important and it is as important for the young as the old. For example, even booking a coronavirus vaccination requires people to navigate their way through at least a website or a mobile app. Internet resources have all the potential to make the lives of adults easier as long as they are used effectively and by protecting your online privacy. Learners could be encouraged to download an app in line with their interest from a variety of options among apps. They can also be encouraged to find someone they know using a social media app.

5.4 Online Job Seeking

The World Wide Web operates as a tool that employers across the world have started to utilize in their recruitment process. A wide range of employment resources can be found on the web to assist employers with their search for potential employees. Online recruiting offers a practical and quick way for recruiters to reach a large pool of job applicants. Just as employers have included the internet in their recruitment process, many job seekers have started to use the internet as an essential part of their job hunting efforts. Job seekers can reach numerous search options on the internet. They can have a look at job postings on online job boards. They can additionally look for job vacancies posted on more specific job boards such as the ones on teaching, engineering or nursing. Job seekers may also review traditional job ads on online newspapers.

The Internet and Job Search

Despite the rapid development of the Internet, of course there is a group of people, especially older adults, who still prefer traditional methods of job search and do not benefit from the Internet for their job seeking. However, it should be undoubtedly stated that technological developments and the continuous growth of the recruitment industry will trigger the emergence of online job search as one of the leading job search strategies in the very near future. It needs to be also noted that the swift, cost-effective communication and search opportunities will possibly make the online labor market ideal for many job hunters to get a job and for a growing number of recruiters to reach employees. The below listed benefits could possibly explain more why online job seeking and recruitment should be preferred more than traditional employment methods:

- Job seekers can look for jobs in a wider range of fields, including the ones which are less technical. They can reach job openings ranging from professional positions to beginner-level positions on the Internet.
- Online job search could potentially decrease the rate of unemployment. The cost-effective and the rapid spread of detailed job information help with time-saving since this aids a vacancy to be filled by facilitating the connection of employers and job seekers.
- Internet job search boosts the performance of the labor market by generating a more favorable match between available job ads and job seekers as it provides an easy access to occupations from various domains with different experiences, qualifications, and educational requirements.

- Internet job search encourages employed job seekers to attend the job market as free agents so that they can be informed about labor industry and how to market themselves.
- Instead of reaching job applicants through printed job ads at a higher cost, internet recruitment provides cheaper access to a good number of potential job applicants at a lower cost.
- Online job search offers the opportunity to access all kinds of updates on job postings regardless of time and place.

Building an Online Personal Brand

An online personal brand means online presence. It basically refers to the first step that you, as a job seeker, need to take before you start writing or updating your curriculum vitae or applying for a job. By means of your online personal brand, you are expected to reveal your skills, interests and area of expertise. For this reason, when a recruiter reaches information about you online, your personal brand connects the recruiter to who you are and what you can do. In other words, it's important to build your brand in order to:

1. Develop professional existence in online community
2. Display yourself as a prospective candidate for recruiters
3. Make connections with those who may aid you with your job seeking

An essential point in creating an online personal brand is to decide on what you want to lay weight on. In this regard, you need to focus on your attributes that make you different from other people looking for the same position and also which can help you stand out (Doyle, 2009). For instance, if you are an electrician, you may want to emphasize your skill in repairs of

particular type of electrical appliances and machinery. If you are a graphic designer, you may want to promote your knowledge in creating a very good design using colour and layout. Even though you possess a wide range of expertise in different fields, it is more reasonable to choose only one of them. Otherwise, a vague brand will trouble employers with capturing your expertise and experience clearly.

https://www.youtube.com/watch?v=zPMzzNKVDig

Creating an Online Curriculum Vitae

A curriculum vitae (CV) is a very important document that gives employers a summary of your educational and professional background as well as your skills. The main parts of a CV can be listed as follows :

- *Personal information:* First and last name, address, phone number, email address
- *Education:* Schools, colleges, universities, any other training with graduation dates
- *Work experience:* Companies, durations, and positions
- *Skills:* The most relevant skills to the job your are looking for

Here is the list of some popular CV maker sites where you can create your own curriculum vitae choosing one among a good many of templates:

www.visualcv.com

www.canva.com

www.cv-template.com

www.online-cv.co.uk

☑ ***Sending your curriculum vitae***

Besides mailing your CV via a private courier service, you may also send it via email or make an online application without the need for sending your CV separately.

Sending via email: When you make your application through email, you can attach your CV to the email message. You can be herein suggested to send yourself a copy by using the Bcc feature of email program so that you can keep a record of your application process.

Applying online: If you are making your application using a job site such as Indeed or Monster or if you are applying on a specific company's website, the procedure is more straightforward. You are only required to follow the instructions. You will either need to upload your CV or copy and paste the information on the original CV into an online CV maker or application.

How to Apply for Jobs Online

There are a couple of more common ways through which you can apply for jobs online:

- Sending an email to, more likely, human resources department of company
- Following instructions on company's website
- Using job search engines and job boards which are valuable tools for job hunting
- Using social and professional networking sites

☑ ***Job search engines and job boards***

Job search engines are one of the most effective ways to speed up and facilitate your job search. They don't work in the same way as traditional job sites. Instead of providing the list of jobs posted by recruiters, they are designed to allow job seekers to scan the entire internet environment in a single step. These search engines explore not only company websites and the leading job sites but also they search other job listings.

As for the job boards, they can be defined as the websites where companies post their open positions. These job boards serve as a mediator between recruiters and job seekers.

The following is the list of some of the top job search engines and job boards:

RECRUIT indeed one search. all jobs.	***Indeed.com*** is a very user-friendly job search engine. It basically requires to enter two inputs: "what" and "where". For "what" section, you can enter job titles that you're interested in. As for "where", you can enter the names of cities. When you press Enter, you can get the list of actively hiring recruiters within a few seconds.
LinkUp job search engine	This well-known job search engine, ***LinkUp.com***, directly connects job hunters to job vacancies at company Web sites. These companies vary in size from medium to large. You can apply to company sites for any open position that grabs your attention.
SimplyHired	***SimplyHired.com*** brings together postings from the top job boards, newspapers, content sites, associations and company career sites. With its advanced search option, this job search engine allows you to hunt jobs by job type, type of company, location, work experience and when the job was posted. When you use its Who Do I Know feature, you can find out who you are connected with on Linkedin and Facebook within the organisation.
CAREERBUILDER We're Building For You™	***CareerBuilder.com*** is a massive job board where you can not only upload your resume but also sign up for job alerts. Once you sign up for job alerts, you are delivered weekly or daily notifications on new open positions.
MONSTER	***Monster.com*** is a popular job board that provides an online platform for employers and people looking for job opportunities. Job seekers can search the site by location, keyword and job category. Since the site includes a huge database of resumes, employers can filter candidates based on their own criteria.

Social and professional networking sites

Social media sites are online platforms that make it easier for people to share information and make new connections. Thanks to these two important features, social media websites, such as ***Facebook*** and ***Twitter***, have become very important means of job search for job seekers today. Along with job seekers, employers also use these sites to view potential candidates, which creates a need for job seekers to build an active online existence.

In addition to socially-oriented platforms, there are some other online arenas specifically used for professional purposes, such as ***Linkedin***. The focus in these professional networking sites is on your career so they have nothing with your personal life.

Using Facebook for professional networking: With its over 1 billion members, Facebook is considered as the largest social network worldwide. Since the number of employers starting to use Facebook to look for potential candidates is increasing day by day, it has become essential for many job seekers to create a professional Facebook profile as part of their job hunting process. Facebook presents its users plenty of ways to reach out to their network and connect with different employers. However, there are a couple of issues that you need to take into account when you have decided to use your Facebook account for professional purposes:

⇨ *Using* a cover photo and profile picture that look professional in order to make a professional impression

⇨ *Acquiring* a custom username to enable your profile to look more professional

⇨ *Adding* accurate personal information into "Intro" section such as work experience, educational background and professional skills

⇨ *Reviewing* timeline and tagging settings in order to make sure that you will review the posts that your friends tag you in before they appear on your timeline

⇨ *Deleting* unnecessary or awkward things from your timeline

⇨ *Activating* "Who can follow you" button for all people to let them get your updates

⇨ *Making* sure that you are posting regularly and sustaining a regular contact with your followers

Using Twitter for professional networking: Twitter is an online platform that is used for social networking and microblogging. It helps people make new connections and keep in touch with one another. Open positions are posted by organizations, companies and job boards to Twitter and job seekers can benefit from Twitter to ease their job search. You can follow the tips below to build and sustain an influential and professional Twitter profile.

⇨ *Using* a professional profile photo
⇨ *Writing* a clear and concise bio in which you may include a summary of your skills and interests
⇨ *Using* the "Links" feature in order to link your profile to your other social media accounts, your personal Web site, blog, online curriculum vitae or portfolio
⇨ *Starting* to find and follow people who may interest and benefit you the most
⇨ *Enriching* the content of your account with photos, videos or documents that bring your skills, talents and knowledge to the fore

Using Linkedin for professional networking: LinkedIn is a professional networking site with more than 600 million users across the world. Just as Facebook and Twitter, Linkedin offers you an online platform where you can make professional connections, follow related companies or organizations, and reach out to open job positions. Even though the profile of the user on Linkedin is public, the user can alter privacy settings according to the information he may want to make visible or invisible to other users. Once you have signed up, Linkedin will ask you to complete your profile. The more you complete your profile, the more you can appear in searches. Here are tips that can guide you through completing your profile:

⇨ *Uploading* a recent digital photo giving an impression that you are trustworthy, professional and sincere

⇨ *Creating* an eye-catching headline using 120 characters to tell people about yourself

⇨ *Writing* a clear summary of your career-related goals

⇨ *Adding* your previous work experience by putting an emphasis on any piece of information that is related to the kind of job your are looking for

⇨ *Highlighting* any events or projects you have voluntarily taken a part in to let employers know about your values

⇨ *Providing* details about your educational background, achievements, and rewards that are particularly related to career goals

⇨ *Adding* links to your other personal Web sites or accounts which may help you give a good account of yourself

⇨ *Joining* relevant Linkedin groups to exand your network and keep up with the latest developments in your field

https://www.youtube.com/watch?v=oB6O3D6DkMo

Do's and Don'ts of Online Job Search

You can come across a variety of job postings on many different websites. The tips given below may help you to make your online job search more effective and find the right job for you.

∗ ***Do select job sites carefully:*** Since there is a good many of job sites listing different open positions in different locations, you need to be careful about which one or ones you should choose. Otherwise, you can waste your time with the sites that won't fit your interests or area of expertise.

∗ ***Don't keep your search too broad:*** If you narrow your job research, you can reach the best results for job ads that will tally with your skills and experience. The most effective way to refine your research could be to use the Advanced Search feature of the websites. By using this option, you can filter your research by job type, salary, location, and the date of job posting.

∗ ***Do set up email job alerts:*** Once you have decided on the job search sites which you may find useful for you, you can sign up to get job alerts by email for the latest job openings. Once a new job ad that matches up with your criteria is posted, you will be notified immediately.

∗ ***Do keep an up-to-date copy of CV online:*** In order to make your application easily, you should always keep your online CV up-to-date. If you revise it regularly, it will be easier for you to start looking for a job when you need it. Otherwise, trying to find a more up-to-date CV template or remembering what experiences you had in the place where you worked years ago will cost you a lot of time.

∗ ***Don't put embarrasing content on online personal accounts:*** There is always a possibility that potential business owners may have a look at your online profiles. For this reason, you need to be sure that you are keeping them free of inappropriate content. You should also be careful about the privacy settings of your Facebook, Twitter and other social networking sites if you don't want employers to view every private post you have shared.

∗ ***Don't fall for scam job ads:*** You should stay away from any job adverts that require you to pay money, give your credit card information or bank account number in order to get started to work. You are not required to provide any confidential information about yourself at the stage of your job application. The job postings which ask for private information are more likely to be scams.

Exercise

1. Using Web search engines such as Google, Yahoo, Bing or Ask, search about yourself and look at the search results to have an overall idea about your online presence.

2. Considering the search results you have received from Exercise 1, answer the questions below:

- How can you describe your current online personal brand?
- What do you think you are doing well with your online presence?
- How could you make your online presence better?

3. Following the link below, watch the video tutorial on how to use VisualCV website to build a curriculum vitae and find a related video tutorial in your own language. https://www.youtube.com/watch?v=t2uWlg3yc0Q
4. Find three websites that offer different CV templates in your own language. Then decide on one template in one of these sites and create your online CV.
5. Find two job boards which are commonly used in your country and give a brief description of how they work considering the questions below:

- How can job seekers register?
- Do they need to pay money for registration?
- How do the job boards' search engine work?
- What features do the job boards offer their users?
- Are the job boards user-friendly?

6. Go to your Facebook account, think about the topic that may allow you to connect with others of the same professional interest and find three groups you may use for job search.
7. Choose one of the leading local companies you may want to apply to, take a look at its Facebook, Twitter or Linkedin websites, and answer the following questions:

- Who is the target audience of the company? Do they aim to reach potential job candidates, current clients or potential clients?
- To what extent do you think they use the websites effectively?
- What can you suggest to the company officials to make their sites more effective?

The Internet offers an exceptional abundance of information to help people make conscious decisions about their route in life. From choosing a university or college to finding job openings, it's all online. Literally, it is one-click-away to list all the relevant job ads and find the right job for those on job hunting. In order to get learners equipped with the essential knowledge on online job seeking, this lesson has provided such main building-blocks of this process as creating a personal brand, using an online CV template and giving a professional look to online personal profiles.

5.5 Use of Web-Based Sources for Professional Development

How Learners Learn in the Digital Age

With the growing need for distance education and lifelong learning as well as the rapid changes and developments in technology, the interest in online learning has also increased. In particular, with the widespread use of the Internet, people have grasped the importance of learning from one another, which has enabled online social learning to gain speed. In the past, learning could only target a single audience and take place in a single place, but nowadays it can be carried out anytime and anyplace with plenty of individuals in different parts of the world. By taking advantage of online environment, people have the opportunity to come together, collaborate and interact with each other even when they are miles apart. As learning avenues gain new forms, people's learning paths can also undergo some changes. The advancing technology requires people to adopt new behaviors and thus new paradigms are emerging. These changes necessitate developments in practices of individuals on both personal and professional level.

Figure 20. Use of technology by older adults

Besides the rapid growth of technology, this decade has led to another booming trend that may possibly affect utilizing online learning resources. There has been an increase in the number of older adults all over the world as a direct outcome of the aging baby boomer population, innovations in the field of medicine and healthcare, and the rate of increase in life expectancy. As our population is getting older, there will be more people over the age of 65 who may want

to continue working beyond retirement age. This may mean that in order to keep taking an active role in the workplace, older adults will need to acquire new knowledge and develop new skills. Therefore, the objective of adult education will not only be to help adults for gaining work-related knowledge and skills, but also to optimize their lives through lifelong learning opportunities for intellectual growth. Providing older adults with more options for lifelong learning with the help of the Internet will serve as an appropriate distribution system for dialogue, collaboration, and interaction.

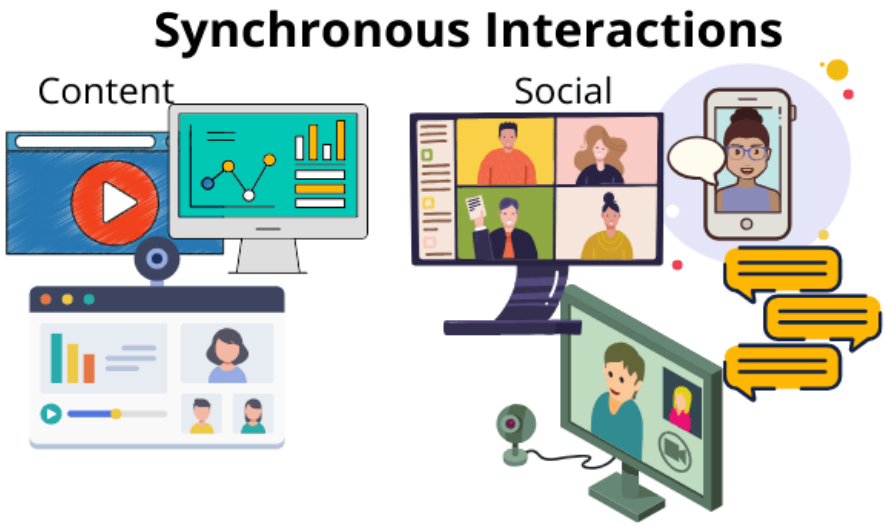


Figure 21. Synchronous learning

Older adult learners interested in lifelong learning are engaging in a process of working in collaboration and managing the learning environment. The tenets of adult learning theory, particularly those underscoring the importance of communication and interaction in learning process, can be applied in both synchronous and asynchronous online learning environments. ***Synchronous learning*** occurs in real-time, interactive environments in which a group of people go online simultaneously. Everyone contributes to the learning process collectively. By means of active participation and dialogue, learners are able to co-construct knowledge, get an immediate feedback, and achieve a common understanding. Some examples of tools that might be used in synchronous online learning environments include audio-conferencing, video-conferencing, virtual classrooms, live webinars, and live streamed videos.

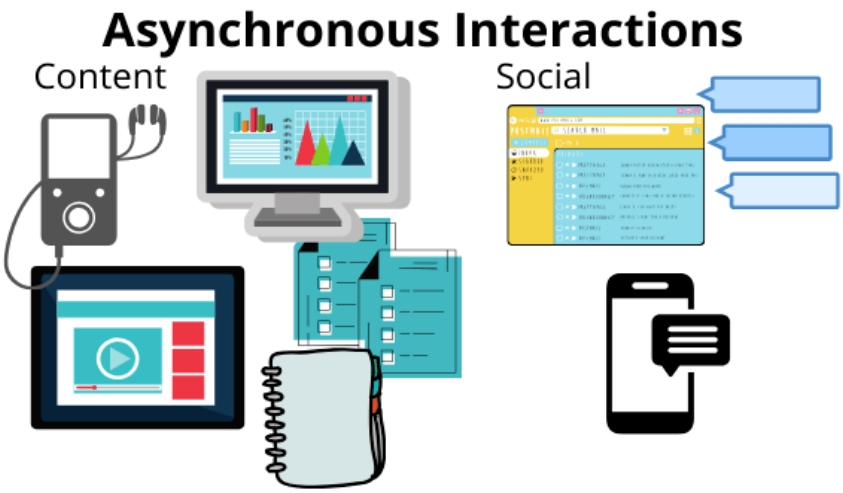
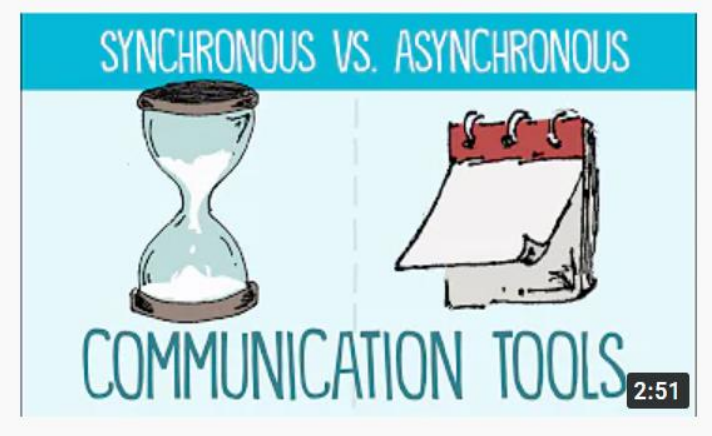


Figure 22. Asynchronous learning

In ***asynchronous learning*** environments the individuals do not have to be at the same place at a certain time. They may access information under their favorable conditions. Asynchronous learning still fosters collaborative interactions and learning in groups by letting learners share their ideas and questions. Some examples of tools that might be used in synchronous online learning environments include email, forums, discussion boards, listservs, blogs, pre-recorded webinars or online courses, and most importantly social media groups. Social media sites provide an online platform for a community of practice where people can develop relationships and trust, collaboration and connections, and a personal learning environment. Both public and private social networking sites have some common features such as member profiles, groups, discussions, and forums. These online communities of practice help participants come together to share a common interest, to learn from experts, and flourish relationships. The participants are here mainly adults who are employed and are seeking career development by learning a new skill.



https://www.youtube.com/watch?v=dX_nZTiZRPE

Professional Learning Network

Professional Learning Networks (PLNs) are a sort of Professional Development. It is based on the idea of learning within the context of an online community. The main purposes of building PLNs are to foster individuals' learning, learn from each other and reinforce one another's knowledge and professional practice. In other words, PLN puts forward that effective learning can only occur in a social community where a group of like-interested and like-minded people come together so that they could share, exchange information and make a contribution to the knowledge and understanding of one another. These interpersonal and reciprocal connections are created by means of new online technology resources, in particular, Web 2.0 tools such as blogs, wikis, podcasts, social networking and bookmarking. The major benefits of building PLNs can be suggested as follows:

- ▶ Promoting self-directed learning
- ▶ Creating an environment for learning in collaboration and sharing resources
- ▶ Helping individuals to join professional learning communities without restriction of time and space
- ▶ Enabling professionals to stay up to date on their relevant field
- ▶ Speeding up clarification of ideas through real-time interaction tools
- ▶ Providing professional development opportunities without added cost

https://www.youtube.com/watch?v=_Fby_VgVpno

The chronological order of evolution of PLNs could be presented in three phases: before the World Wide Web, after the World Wide Web, and with Web 2.0. As illustrated in Table 1 below, with the emergence of Web 2.0 technologies, there has been a remarkable transformation from an individualistic and local environment to a more interactive, collaborative and social environment where people can get an instant access to information across the globe.

Network Features	**Before the *World Wide Web***	**After the *World Wide Web***	**With *Web 2.0***
Environment	Physical, hierarchical, individualistic	Digital, sharable	Technology mediated, open, interactive, collaborative, social
Components	Experts, Colleagues, Resources, Learner	Internet, Experts, Developer, Resources and Learner	Social media connections/contacts and Learner (creator)
Resources	Print, recorded and readable (limited formats)	Digital, pre created/ developed	Digital, crowed sourced, multi format
Channel	Face-to- face or wired communication	Digital, wired/ wireless	Digital, wireless
Flow of information	One way, partially two-way	Two-way	Multi-way
Response Speed	Fixed, slow	Fast, limited	Instant and real-time
Access points	Personal conversations, Media, conferences	Websites, E-mail, List serves	Social Networks, Blogs, Wikis, etc (all web 2.0 tools)
Area	Local, limited	Wide, sometimes restricted	Local/Global (as decided by learner)
Learning style	Structured, pre designed	Planned, Distance mode	Self-directed, flexible
Learner-Collaborator Relationship	Personally known to both, formal	Known or connected	Not necessary to know each other, informal

Figure 23. Chronological Evolution of Professional Learning Networks (Faisal, 2015, p.62)

The Role of Learning Types in Creating a PLN

According to the Read, Reflect, Display and Do (R2D2) model presented by Bonk and Zang (2008), since individuals have different learning styles, they may not prefer the same learning activities as well as technology resources. The model suggests e-learners that they should benefit from various types of learning activities with appropriate means of technology. If you are a reflective and observational learner, for instance, you may be more liable to enjoy reflecting writing and therefore to prefer using blogs or electronic portfolios as technological tools to develop your PLN.

Phase and Type of Learner	Learning Preferences and Activities	Sample Technology Resources and Tools
1. Read: Auditory and verbal learners	Auditory and verbal learners prefer words, sounds, and spoken or written explanations.	Podcasts, online PDF documents, sound or audio files, PowerPoint presentations, online portals, course announcements, help systems, FAQs, Webquests, online newsletters, e-books, and online journals
2. Reflect: Reflective and observational learners	Reflective and observational learners prefer to reflect, observe, view, and watch learning; they make careful judgments and view things from different perspectives, including reflection, self-testing, review, and reflective summary writing.	Blogs, synchronous chats, online exams, writing aids, electronic portfolios, asynchronous discussion, reflective writing tools, online review and self-testing aids, expert videos or performances
3. Display: Visual learners	Visual learners prefer diagrams, concept maps, flowcharts, timelines, pictures, films, and demonstrations.	Concept mapping and timeline tools, interactive news, videostreamed content, online videos, virtual field trips and tours, animations, whiteboards, videoconferencing, online videos, interactive news media, online charts and graphs and visualizations tools, video blogs (that is, vblogs), vodcasts
4. Do: Tactile and kinesthetic learners	Tactile and kinesthetic learners prefer role play, dramatization, cooperative games, simulations, scenarios, creative movement and dance, multisensory activities, manipulatives, and hands-on projects.	Simulations, online games, wikis, digital storytelling and movie making, real-time cases, video scenarios, survey research, continuous stories, groupware and collaborative tools, role play and debate tools

Figure 24. Learning Preferences, Activities, and Technologies in R2D2 (Bonk & Zang, 2008, p.5)

Using Web-Based Sources to Develop Professionally

There are many different tools that professionals can use to develop and maintain a successful professional learning network.

• ***Blogs:*** Blogs, also known as Web logs, are websites that allow people to create an online journal. Just as blogs can be enriched by one person, they can be also developed by the contributions of a group of people with the the help of texts, pictures, graphics, videos and links to other websites. Since these online journals or diaries provide people with an environment where they share their knowledge around a common topic or engage in a public debate, they often arouse interest among a huge readership. Readers can use blogs as a medium of professional development to stay up-to-date with the new resources or materials, technological advances and conferences in a related field of expertise.

• ***Wikis:*** Wikis can be defined as collaborative web pages the contents of which are created, edited, organized or viewed by anyone having internet access. The individuals interested in being a part of virtual learning communities can take the advantage of wikis for developing collective knowledge.

• ***Podcasts:*** Podcasts are widely used media files to disseminate internet-based audio and video content to the large online masses. Whenever and wherever they want, users can either listen to podcasts or download them to their portable digital device such as smartphone, tablet or MP4 player. Podcasts can be found on a wide range of topics, for instance, music, sports, family, politics, health and medicine, technology, education and so on. According to the field of interest or area of expertise, users can learn from experts or other relevant professionals who share their knowledge or experiences.

• ***Social networking sites:*** Social networking sites such as Facebook, Twitter and Ning are also known as the powerful online tools to develop and sustain personal learning connections. These sites provide users with a supportive and collaborative environment where they could easily interact and build relationships with others from different professional backgrounds with the help of discussion groups, video, audio or text sharing.

• ***RSS feeds:*** RSS is an acronym standing for “Rich Site Summary” or “Real Simple Syndication”. It is described as a standardised XML format which lets users subscribe to the content of a website using such tools as newsreaders or aggregators. When you subscribe to a feed, you are no longer required to check every single site in order to receive up-to-date information about

its content. Instead, the notifications or the updated information from the subscribed sites are automatically organised by the aggregator.

The following is a list of free aggregators (D'Souza, 2006, p.8):

Web-Based Aggregators

Bloglines - http://www.bloglines.com/

NewsIsFree - http://www.newsisfree.com/

Newsgator - http://www.newsgator.com/

Desktop Aggregator

Fuzzy Duck - http://www.fuzzyd.co.uk/RSSreader/

FeedReader - http://www.feedreader.com/

CITA RSS Aggregator - http://www.seeita.com/RSSA/

Extensions and Toolbars

Wizz RSS (Firefox) - http://www.wizzcomputers.com/WizzRSS.php

My RSS Toolbar – (Internet Explorer) - http://www.myRSStoolbar.com/

Attensa (Outlook) - http://www.attensa.com/

• ***Discussion boards:*** Discussion boards could be also named as bulletin boards, forums, and threaded discussions. Since discussion boards are generally provided during or after a particular training or course, they can be considered as asynchronous activities, as well. They are always available to prompt individuals to write their own comments or react to the ideas introduced by other people. A single question may initiate a discussion and as people write their comments, this may lead to threads and sub-threads.

• ***Massive open online courses (MOOCs):*** These online asynchronous courses are basically open to all individuals regardless of their age and educational background. They can be found in a great variety of topics. Many of them are created with the aim of stimulating adult and young adult learners. However, anyone eager to participate is allowed to benefit from these online courses with no charge. At the end of each course, the participants are required to view video lectures, contribute to discussion forums and submit their assignments. Coursera, Udacity and edX are popular MOOC provider platforms.

• ***Social bookmarking or tagging with folksonomies:*** Social bookmarking or tagging with folksonomies is a kind of Web-based app which allows users for bookmarking, directing, publishing, making comments on, and developing their own tags for the URL they wish to share. The folksonomy is based on the idea that a group of people need to work in collaboration in order to put pieces of information together according to the categories determined before. Besides, these tags include RSS feeds that might be gathered in learners' aggregator.A most common example of social bookmarking is Delicious (http://del.icio.us).

Exercises

1. Think about your own personal-professional learning network and try to answer the following questions:

- What do you use to connect with people?

- Who do you connect with?

- What is the motive for your connection?

2. Considering the Read, Reflect, Display and Do (R2D2) model, answer the following questions:

- What kind of learner are you?

- How do you think your learning style relates to your online learning preferences?

- Which suggested technology resources and tools do you already use?

- How successful do you think they are in helping you grow professionally?

3. Look at the figure below that illustrates an example of a professional learning network for a teacher (Trust, 2012, p.134) and design your own professional learning network according to your own research interest or field of expertise.

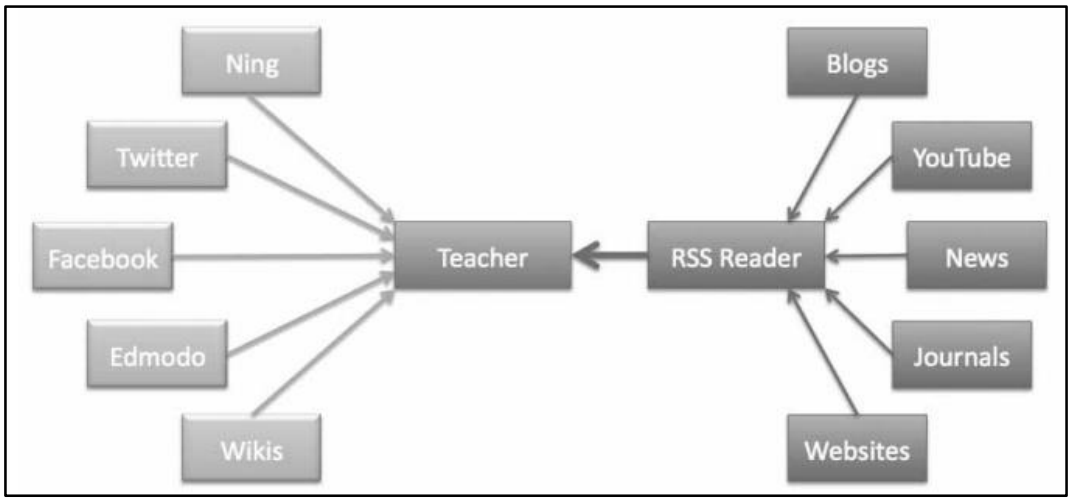


Figure 25. Professional learning network for a teacher (Trust, 2012, p.134)

Technology is perpetually changing and it requires especially the individuals aged 50 and above to keep up with today's learning material. Online learning environments offer a wealth of opportunities for interaction, communication, and collaboration. That's why, the effective and appropriate use of web-based sources becomes critical for adults to help themselves develop both personally and professionally. In this regard, with the help of the topics covered throughout this lesson, the adult learners are expected to gain an understanding of how they can learn best and how that relates to different online learning environments.

Additional Resources

• 9 Important 21st Century Skills 2022: https://www.youtube.com/watch?v=tKqQY8irHQA
• #2 How Digital Technology Is Changing Your World: https://www.youtube.com/watch?v=xQXWq4C32EM
• Computer Science Basics: Hardware and Software: https://www.youtube.com/watch?v=vG_qmtdBPTU
• 'Fake News' explained: How disinformation spreads: https://www.youtube.com/watch?v=8fQdzVbQlaU
• Choosing Reliable Sources: https://www.learningforjustice.org/classroom-resources/lessons/choosing-reliable-sources
• Definition of Media Literacy: https://www.youtube.com/watch?v=GIaRw5R6Da4
• How to detect false news: https://www.youtube.com/watch?v=AkwWcHekMdo
• What Are credible Websites: https://www.youtube.com/watch?v=AFEwwG7rq0E
• What's Your Password: https://www.youtube.com/watch?v=UzvPP6_LRHc
• What is phishing? Learn how this attack works: https://www.youtube.com/watch?v=Y7zNlEMDmI4
• Why is Free WiFi Dangerous? Simply Explained: https://www.youtube.com/watch?v=SfFSxThtzhE

Module 6. Basic Concepts of Online Collaborative Learning

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Research and Innovation in Education Institute

Learning Objectives

By the end of the Learning Unit, trainees will be capable of:

- Understand what is collaborative learning
- Carry out collaborative learning effectively in the classroom
- Describe the tools used for collaborative learning
- Able to use a variety of online tools and social media to communicate and engage in peer review activities
- Understand and elaborate basic concepts of online collaborative learning
- Understanding the different platforms used on online collaborative learning
- Realize the advantages of online collaborative learning

Basic Concepts (Key Words)

▪ Online Collaborative Learning	▪ Online Education Resources
▪ Synchronous Learning	▪ PbWorks platform
▪ Asynchronous Learning	▪ Online Tutorials and Videos
▪ Collaborative Learning	▪ Massive Open Online Courses
▪ Project-Based Learning	▪ Learning by doing
▪ Research applications	▪ Search engines
▪ Moodle platform	▪ Collaborative Learning Platforms

Preliminary Notes

I. Creating a Collaborative and Engaged Classroom Site-Based for Adult Learning

Without the collaboration of its members society cannot survive, and the society of man has survived because the collaborativeness of its members made survival possible…. It was not an advantageous individual here and there who did so, but the group. In human societies the individuals who are most likely to survive are those who are best enabled to do so by their group. (Ashley Montagu, 1965)

Collaborative Learning reaches its optimal level when it is transformed into a permanent human need and provides a basis for lifelong learning. In a knowledge society, much depends on the people themselves. What matters most is the human ability to effectively and reasonably produce and use knowledge in the face of constant changes. To fully develop this skill, people should be willing and able to take their own lives - in short, become active citizens. Lifelong education and training is the best way to meet the challenges brought by change[34]. At the same time, the implementation of the Lifelong Learning idea is an important extension of the concept of lifelong learning based on expanding knowledge, skills and competences[35]. The concept of self-education is related to the concept of collaborative learning because in a group, the individual is enriched by the wisdom of its members. Each adult has a cultural, educational background and experience that can serve as a motor to create effective educational environments.[36]

[34] Komisji Wspólnot Europejskich (Bruksela, 30 października 2000 r.)

[35] Nauczyciel akademicki wobec wyzwań edukacyjnych; Redakcja: Piotr Wdowiński; ISBN/ISSN: 978-83-7969-847-9; Wydawnictwo Uniwersytetu Łódzkiego; 2015. S 25

[36] Ochoa-Daderska, Renata & Ochoa Siguencia, Luis & Gródek-Szostak, Zofia. (2020). Supporting Autonomy in a Technology - Mediated Environment. 10.5281/zenodo.3830979..

Basic Concepts of Collaborative Learning

Collaborative learning on trainees

Collaborative learning is key to developing a range of interpersonal skills such as effective communication, negotiation, conflict resolution, decision making, leadership, personal responsibility and teamwork. These skills should be developed in adults participating in our courses as they can help other participants become effective collaborators and efficient citizens in a very complex world. Trainees will need creativity to solve new problems that require innovative solutions.

Collaborative learning on teachers

Educational activities should be designed in such a way that they can develop these skills in the adult learners as much as possible. Our adult learners like to work together, but they need to learn how to work together effectively to achieve a common goal. Working on a collaborative project requires the ability to use higher-order mental processes such as problem-solving, critical thinking, and the ability to provide constructive feedback to others to take a step forward. It is often impossible without the motivation from the trainer.

Collaborative task structure

An Adult trainee participating in our courses is invited to participate in a collaborative learning group. This will permit the participant fully achieve the learning goals if the rest of the group members have completed their tasks

Collaborative social form

participants work in small collaborative learning teams that accept and implement jointly set goals. Collaborative work is related to interacting with and / or supporting others

Collaborative themes

collaborative learning is based on natural predispositions to cooperate and act altruistic in situations where it is possible to choose between cooperation or individual action.

6.1 Introduction and Purpose for self-education, engagement, and Collaborative Learning

Collaborative learning is the process of breaking a classroom into small groups so participants can discover a new concept together and help each other to learn, exchange and build knowledge. The idea of collaborative learning has been around for decades, but it never got to the same prominence as blended learning or differentiated instruction[37].

According to W. Spasowski, "self-education" consists in independent setting and solving the necessary tasks, because they result from the perceived nature of the conscious needs of an individual's more and more intense life "(W. Spasowski 1953, 2nd edition; p. 78). Self-education is very closely related to collaborative learning because it breaks the schematic approach to education. It covers two processes:

- self-education: it is to lead to the assimilation of a hierarchy of values, development of valuable views, beliefs, attitudes, shaping a moral character, a high degree of aesthetic culture and physical fitness.
- self-education, learning about reality, developing the intellectual sphere, gaining operational knowledge, developing specific skills.

How adult trainees interact with each other is a neglected aspect of instruction. Much training time is devoted to helping trainers arrange appropriate interactions between trainees and materials (i.e., textbooks, curriculum programs) and some time is spent on how trainers should interact with trainees, but how trainees should interact with one another is relatively ignored. In this way self-education and collaborative learning should be examined and use collaborative learning for motivating self-learning.

How trainers structure trainees- trainees interaction patterns has a lot to say about how well trainees learn, how they feel about the learning community and the trainer, how they feel about each other, and how much self-esteem they have.[38]

[37] https://www.aeseducation.com/blog/what-is-cooperative-learning-and-how-does-it-work; Chris Zook on October 18th, 2018; What Is Cooperative Learning and How Does It Work?

[38] http://www.co-operation.org/what-is-cooperative-learning

https://youtu.be/mmtisRvZ0-4

Why Collaborative Learning

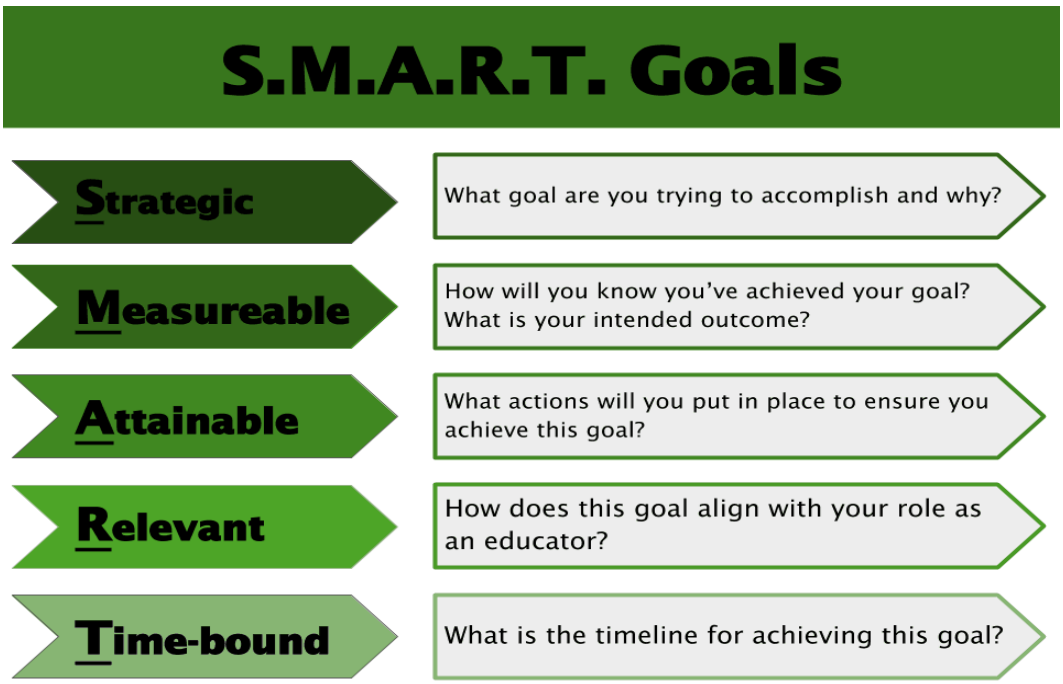
Collaborative learning is key to developing a range of interpersonal skills such as effective communication, negotiation, conflict resolution, decision making, leadership, personal responsibility and teamwork. These skills should also be taught to adults as they can help our adult trainees become effective collaborators and efficient citizens in a very complex world. Trainees will need creativity to solve new problems that require innovative solutions. Educational activities with adult participants should be designed in such a way that they can develop these skills as much as possible "[39]

Trainees' learning goals should be structured in such a way that promotes collaborative, competitive, or individualistic efforts. In every classroom, instructional activities are aimed at accomplishing goals and are conducted under a goal structure. A learning goal is a desired future state of demonstrating competence or mastery in the subject area being studied.

The goal structure specifies the ways in which adult trainees will interact with each other and the trainer during the instructional session. Each goal structure has its place (Johnson & Johnson, 1989, 1999). In the ideal classroom, all trainees would learn how to work collaboratively with others, compete for fun and enjoyment, and work autonomously on their own. The trainer decides which goal structure to implement within each lesson. The most

[39] https://www.etwinning.net/pl/pub/highlights/collaborative-learning-an-int.htm

important goal structure, and the one that should be used the majority of the time in learning situations, is collaboration.[40]



Setting S.M.A.R.T. Goals as an Educator[41]

Collaborative Learning, sometimes called small-group learning, is an instructional strategy in which small groups of trainees work together on a common task. The task can be as simple as solving a multi-step problem together, or as complex as developing a new software. In some cases, each group member is individually accountable for part of the task; in other cases, group members work together without formal role assignments. The trainer will decide which method will use taking into account the learners needs and own preferences[42]

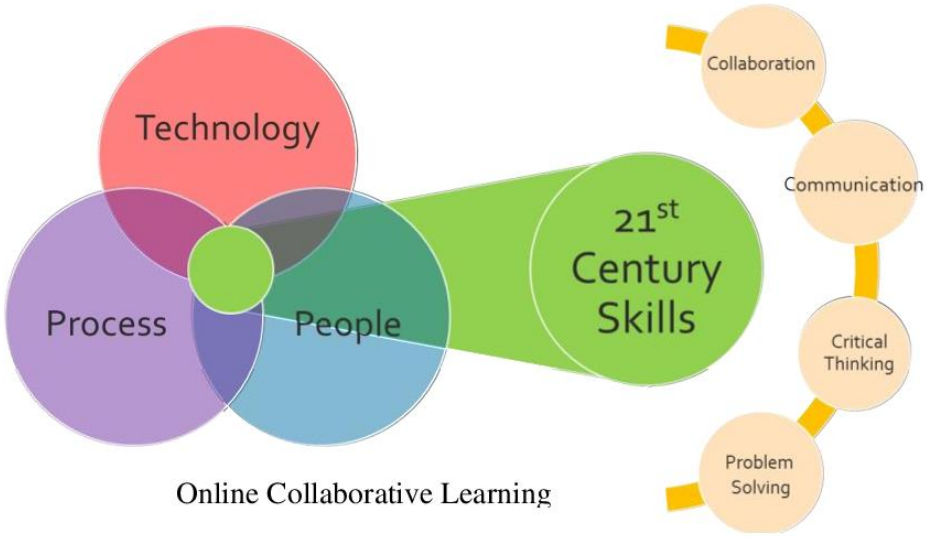
An example of a very popular collaborative learning activity that trainers use is jigsaw, where each adult learner is required to research one section of the material and then present what they have found to the other members of the group. Collaborative learning is based on group work, but it's also so much more than that. The core element of collaborative learning is to

[40] http://www.co-operation.org/what-is-cooperative-learning

[41] Setting s.m.a.r.t. goals as an educator. Retrieved April 03, 2021, from https://achievethecore.org/aligned/setting-s-m-a-r-t-goals-as-an-educator

[42] https://www.teachervision.com/professional-development/cooperative-learning

showcase the positive effects of interdependence while underlining the importance of personal responsibility. This happens naturally in collaborative learning since trainees work with one another, but they all have a different task to accomplish or concept to explain. As a bonus, your trainees are being social while they're working in collaborative learning. That could be an advantage or disadvantage for you, depending on the class. Regardless, the experience of working socially can help trainees with soft skills, which is a nice bonus to collaborative learning in general.[43]



21st Century Core Soft Skills Research Focus[44]

The purpose of collaborative learning groups is to make each member a stronger individual in his or her right. Trainees learn together so that they can subsequently perform higher as individuals. The third essential component of collaborative learning is promotive interaction, preferably face-to-face.[45]

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[43] https://www.aeseducation.com/blog/what-is-cooperative-learning-and-how-does-it-work

[44] Razali, S., Hussin, H., & Shahbodin, F. (1970, January 01). Figure 1 from 21st century core soft SKILLS research focus for integrated online project based collaborative Learning Model: Semantic Scholar. Retrieved April 03, 2021, from https://www.semanticscholar.org/paper/21st-Century-Core-Soft-skills-research-focus-for-Razali-Hussin/b370945f9e01824e83f599df563b9694e9efa4ae/figure/1

[45] http://www.co-operation.org/what-is-cooperative-learning

Collaborative learning is a successful teaching strategy in which small teams, each with trainees of different levels of ability, use a variety of learning activities to improve their understanding of a subject. Each member of a team is responsible not only for learning what is taught but also for helping teammates learn, thus creating an atmosphere of achievement.[46]

Collaboration is working together to accomplish shared goals. Within collaborative situations, individuals seek outcomes that are beneficial to themselves and beneficial to all other group members. Collaborative learning is the instructional use of small groups so that trainees work together to maximize their own and each other's learning. It may be contrasted with competitive (trainees work against each other to achieve an educational goal such as a grade of "A" that only one or a few trainees can attain) and individualistic (trainees work by themselves to accomplish learning goals unrelated to those of the other trainees) learning. In collaborative and individualistic learning, the trainer evaluate trainees' efforts on a criteria-referenced basis while in competitive learning you grade trainees on a norm-referenced basis. While there are limitations on when and where a trainer may use competitive and individualistic learning appropriately, you may structure any learning task in any subject area with any curriculum collaboratively.[47]

Like any learning strategy, it's completely up to you how you want to use collaborative learning in your classroom. However, it's important to note that most trainers don't start a class period with collaborative learning. The reason is simple: Trainees haven't focused on the class subject yet, so they're not going to be focused when they break into groups. After all, maintaining focus is one of the chief obstacles in effective collaborative learning.

If your trainees just come from talking to their friends in the hall to talking to their friends in the classroom, they're not going to have the required focus to learn anything. That's why many of the trainers in our adult learning community start class periods with bell work. It could be working through a lesson on a computer, completing a quick worksheet, setting goals for that class period, or anything else that helps a trainee think about the class. After bell work, trainers go in a variety of different directions depending on what they want to teach that day. During early days of the learning period [quarter, semester, course], it may make the most sense to transition into a standard lecture that introduces a topic to trainees. But lectures are old-school,

[46] https://www2.ed.gov/pubs/OR/ConsumerGuides/cooplear.html

[47] http://www.co-operation.org/what-is-cooperative-learning

and they don't always hold the attention of today's always-connected adult generation. That's when you can jump to a collaborative learning activity. Trainees have heard the conceptual details of what they're learning, and now they can apply those to a group activity.

That activity could be a discussion, project, exercise, or almost anything else. As long as your trainees are working together toward a goal, you're on the right track!. To wrap things up, have trainees groups present their end results to one another. This is a great way to spur a class-wide discussion, allowing other groups to hear ideas that they may have never considered. It's also an excellent way to start an educational debate, in the event groups disagree with one another.

That may sound like a negative outcome of collaborative learning, but classroom disagreements are actually wonderful learning opportunities for both you and your trainees. Trainees get to hear both sides of an opinion, which is always good.

Understanding an opposing viewpoint helps keep trainees grounded in a debate and prevents them from characterizing or generalizing people who think differently from them. You also get to hear the way your trainees think. This keeps you in touch with your trainees' generation, and it also lets you notice trend shifts, value changes, and even maturity in the thought processes of your trainees. Finally, remember that you're in control of your classroom. The debate, if it happens, ends when you say it ends[48].

Once you end it, give yourself enough time to recap the day. That'll help trainees keep everything they've learned and accomplished in context. The next class period, you do it again![49]

According to David Johnson and Roger Johnson (1999), there are five basic elements that allow successful small-group learning[50]:

- Positive interdependence: Trainees feel responsible for their own and the group's effort.
- Face-to-face interaction: Trainees encourage and support one another; the environment encourages discussion and eye contact.

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[48] Ochoa Siguencia, Luis & Marzano, Gilberto & Kaczmarczyk, Patrycja. (2017). Online work-space-shared management to support collaborative learning.

[49] https://www.aeseducation.com/blog/what-is-cooperative-learning-and-how-does-it-work

[50] https://www.teachervision.com/professional-development/cooperative-learning

- Individual and group accountability: Each trainee is responsible for doing their part; the group is accountable for meeting its goal.
- Group behaviours: Group members gain direct instruction in the interpersonal, social, and collaborative skills needed to work with others .
- Group processing: Group members analyse their own and the group's ability to work together.

Persistent in self-education efforts can count on the following results:

- progressive automatization and individualization of the individual,
- development of creative dispositions,
- self-discipline and perseverance in personality aspirations,
- clear development dynamics,
- higher level of personality integration,
- fuller use of internal (disposable) and external (situational) development opportunities.

In order to achieve such effects, one must set high standards for oneself, constantly ask oneself new questions, activate an act of will and genuine effort and be ready to risk destroying existing patterns.

https://youtu.be/oI0NZNYxiFI

Collaboration in the Classroom

Once groups have been determined, the most important phase begins. Instruction should be based on solid content, with grouping used to enhance and customize trainees' learning. Trainees should understand the objectives, instructional tasks, and criteria for success. Review

and assign learner roles in order to smooth the transition to collaborative learning groups. During instruction, monitor groups and reinforce collaborative behaviours, conduct observations, assess social skills, or interview trainees.[51]

After instruction, assessments may include paper and pencil achievement tests and/or measures of actual trainees or group performance. Develop a way to assess both group and individual accountability. After working in groups, trainees should engage in group processing activities where they discuss the interpersonal skills that influence their effectiveness in working together[52].

The process of self-education consists in fusing three groups, essential elements, transformed in the course of human involvement in social life, which are: awareness, will and practical action, aimed at achieving the intended goals and life tasks of a human being.

Be sure to schedule a time for trainees to explain to the class how they completed a task or solved a problem, as different groups may have developed different solutions. Explaining their group's process is an important skill for trainees to develop. In addition, the whole class benefits from the range of ideas from each group.

You will need to decide how trainees and groups will be made accountable for their learning.

In collaborative classrooms, it is often difficult to assign individual grades. Some trainers give "group" grades that each learner receives, but this can be problematic if a few trainees do the majority of the work within a group. Giving each member both an individual and a group grade is another option. Each trainee can receive a grade for the group task and can be responsible for a subtask, which is graded as well. Some trainers average the educational grade with a "group performance" grade. This makes group interactions and processes as significant as educational. If you are uncomfortable with this, a good solution is to have trainees complete an individual task after the collaborative learning activity, such as writing a reflection piece about what they learned and how their group worked to complete the task. This may be a preferable way to evaluate trainees because it can be used as an assessment of trainee learning, metacognition,

[51] https://www.teachervision.com/professional-development/cooperative-learning?page=2

[52] Marzano, Gilberto & Ochoa Siguencia, Luis. (2017). Online collaborative learning: the EsCAlADE training experiment.

and group processing. Another possibility is to have individual trainees each complete a final draft of a report that the group has started.[53]

Two other groups of factors influence the behaviour of trainees during collaborative classrooms:

Personal - internal:

- previous educational experience,
- individual tastes and preferences regarding the forms and methods of learning, ways of acquiring and using sources of knowledge, individual pace and intensity of learning,
- attitude towards knowledge (vertical - "to be educated", horizontal - "to be educated"),
- value judgments about independent and guided work,
- self-discipline assessment,
- ability to organize free time,
- educational influences.
- Situational - external:
- availability of knowledge sources,
- family situation,
- financial situation,
- time opportunities,
- requirements of the environment (work, school, family, social)

Personal and situational conditions influence the motivation for collaboration and self-education. Two groups can be distinguished among the motives for developing self-educational activity:

- following the autotelic value of self-improvement (e.g. developing abilities, interests, testing oneself, satisfying curiosity, gaining an individual face, finding the meaning of life) - the so-called internal motivation.

[53] https://www.teachervision.com/professional-development/cooperative-learning?page=2

- following utilitarian intentions (acceptance in the community, promotion, elimination of defects, fame) - the so-called external motivation.

Both types of motivation are of great value for the development of trainees, but internal motivation guarantees greater durability and efficiency of this process, making it independent of "external" rewards. An important task of non-formal education is to ensure that external motivation is transformed under the influence of educational influences into internal motivation.

Some tasks are complex and may benefit from clear roles and responsibilities assigned to each trainee within a group. Create team roles that are simple, clear, and important. Roles that are frivolous, unclear, or too complex may frustrate one or more team members. Some sample roles are:[54]

- Organizer — provides the group with the overall process structure
- Recorder — writes down important information (e.g., directions or group work)
- Checker — Makes sure that all team members understand the concepts and the team's conclusions.
- Questioner — generates questions and involves all trainees
- Assessor — evaluates the progress of each work session
- Encourager — models and reinforces appropriate social skills
- Summarizer: Restates the team's conclusions or answers.
- Spokesperson — represents the group and presents group work to rest of the class
- Timekeeper — keeps group on task and on time
- Team facilitator—Moderates discussions, keeps the team on schedule, ensures that work is completed by all, and makes sure that all have the opportunity to participate and learn.
- Elaborator—Relates the discussion with prior concepts and knowledge.
- Research runner—Gets needed materials and is the liaison between teams and between their team and the instructor.

[54] https://www.teachervision.com/professional-development/cooperative-learning?page=2

At the start of a course, consider allowing team members to pick their own roles. As trainees become more comfortable with teamwork, however, it is a good idea to rotate roles within the teams so that trainees experience a variety of responsibilities.[55]

Looking to the future, today's trainees working in groups on the principles of collaborative learning will in the future create links of a knowledge-based organization. Main pillars and features on which a learning organization should be based, supported by elements of collaborative learning. Lack of knowledge, "sheep rush" and well-worn patterns of behaviour lead to irrational behaviour both in the sphere of our personal life and our business.

A learning organization takes time and a lot of effort to strive for perfection. The open-mindedness of adult learners and top-down consent to attempts to improve put the company on the right track. However, we can speed up this work by providing ourselves and our learners with systematized tools and knowledge that has been used in a number of educational institutions for many years and allows for efficient achievement of the adopted goals.

This method can be called “Theory of Limitations”, which allows breaking the most ingrained stereotypes and strengthening the learner's development.

Benefits of Learners Collaboration:

Learning experiences are dynamic, social, engaging, and learner-led results in deeper learning. The benefits of trainees collaborative learning include:

- Better trainee preparation for social and employment situations
- Improved development of higher-order thinking, communication, and leadership skills
- Greater trainee -group cooperation and synergy
- Increased trainee self-esteem and perseverance
- Wider understanding from a variety of diverse viewpoints

The trainee collaboration tools that we present are web-based tools that empower trainers/teachers and trainees to perform a variety of tasks, such as interactive discussions, collaborative activities, researching online learning resources, assessing knowledge and many more others.

[55] https://www.teachervision.com/professional-development/cooperative-learning?page=2

Exercise:

Make groups of three people. Each group chooses one collaborative tool. Each person searches on Internet for information and comments on the content found on internet, makes a small report and presents to other group.

- GoToMeeting
- Flowdock
- Slack
- WebEx

6.2 Creating an Engaging Learner Environment

In the mid-1960s, collaborative learning was relatively unknown and largely ignored by educators. Formal and Non formal education teaching was dominated by competitive and individualistic learning. Cultural resistance to collaborative learning was based on social Darwinism, with its premise that trainees must be taught to survive in a "dog-eat-dog" world, and the myth of "rugged individualism" underlying the use of individualistic learning.

While competition dominated educational thought, it was being challenged by individualistic learning largely based on B. F. Skinner's work on programmed learning and behavioural modification. Educational practices and thought, however, have changed. Collaborative learning is now an accepted and often the preferred instructional procedure at all levels of education[56].

Engaging Learning Environment

The key factors in developing an engaging learning environment that increase the level of managing one's own activity are:

- motivation,
- sense of agency
- self-confidence.

[56] Ochoa Siguencia, Luis & Herman, Damian & Marzano, Gilberto. (2015). Creating effective online collaborative learning groups at higher education institutions.

Nobody likes coercion. The adult learner is not thrilled with following the trainer orders, and the average recipient reacts allergically to advertisements in which the word "must" is repeated like a mantra. The Adult Education Teacher does not point a finger, but suggests solutions. So how to create an engaging learning environment that effectively creates knowledge?

Motivation to learn is an important element in building a friendly learning environment, and thus increasing the effectiveness of learning and teaching, incl. foreign languages or Information and Communication Technology. It is important not only from the learner's perspective, but also from the point of view of the learner's teaching work. At this stage of your considerations, it is helpful to focus on the motivation of these first.

A highly motivated learner will master the learning content with any method, even with the best teaching method it will turn out to be ineffective if it is not adequately responded to by the learner.

When talking about building a Engaging [friendly] learning environment, it should be remembered that the motivating factors (motivators) should be activated as often as possible and - if possible - in a coupled manner, i.e. both in Non-formal learning learners and in their own environment and family. It is worth remembering that the level of learner's motivation to learn something is also conditioned by the level of his / her own awareness of the wide range of opportunities and benefits that may result from active participation in a course and continuous development of skills and competence necessary for daily work.

Factors Contributing to the Development of Engaging Learning Environments

Individualizing learning means adapting the content, methods and means of learning to individual abilities, skills and interests of trainees. It is a specific form of education, which allows for the differentiation of the learning process in such a way as to favour it maximizing the learners' development opportunities. By planning, organizing and finally undertaking didactic and educational activity, the teacher should take into account psychological, i.e. determinants of learning and teaching processes lying on the learner's side, incl. his: abilities and talents, level of intelligence, cognitive styles, temperament, motivation, interests, aspirations, general psychomotor performance or the level of deficits.

Individualization teaching is favoured by the trainer's differentiation of the goals and scope of the content of education, pace, time, forms and places of learning / teaching, as well as the use of activating methods (cf. Milerski, Śliwerski 2000: 84-85).

The subjectivity of a learner is closely related to his personality traits, at the same time it is conditioned by the external environment - in the case of formal and non-formal learning to the greatest extent by the trainer. The attributes of subjectivity include primarily:

- own identity,
- awareness of own needs and possibilities,
- autonomy,
- agency,
- influencing your own and other people's actions,

- bearing responsibility for the effects of these actions.

The experience of subjectivity is therefore a necessary condition for one could talk about teaching and upbringing as individualized processes, aimed at satisfying the broadly understood needs of the trainee, which, however, should be clearly equated with his striving for self-fulfilment. Thus, teaching empowerment is the recognition by the trainer and other staff of the learner's subjectivity - his right to realize himself in the conditions of non-formal or formal educational institution with all its consequences[57].

On-line Learning Environment Principles

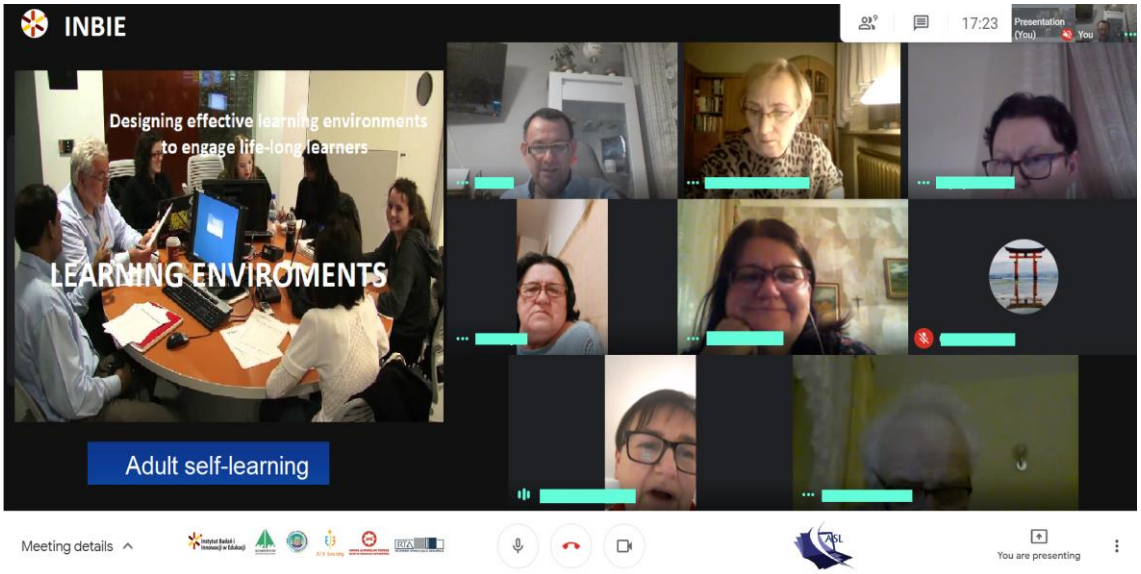
Regardless of whether it is stationary or remotely - it is important that we are prepared for both variants.

The teaching institutions are changing due to COVID-19 pandemic, at a surprisingly fast pace, especially in the area of new technologies. We can't pretend we don't see it. For online learning to be successful, trainers and managers need to be aware of the methodology and tools that are necessary to effectively teach trainees.

Here are the top 10 principles that will allow us trainers to create an online learning environment [topics / principles to be discussed during the lessons].

- Learn about the technological possibilities of your trainees and the resources at their disposal (equipment, Internet, housing opportunities, family situation)
- Designate a common learning space
- Take care of ways of communicating with trainees
- Build a community and take care of the atmosphere
- Introduce synchronous and asynchronous teaching methods
- Reform your assessment methods
- Remember to get feedback from your trainees
- Collaborate with other trainers/teachers and share experiences and reflections
- Take care of yourself and give yourself time

[57] Ochoa Siguencia, Luis & Kopiec, Agnieszka. (2019). Crowdsourcing solutions for supporting collaborative learning: a case of undergraduate management trainees. 10.21125/edulearn.2019.1489.



INBIE online learning environment[58]

Collaborative Learning Activities to Be Implemented in Engaging Learning Environments

Collaborative learning is presently used in formal and non-formal education dealing with adult education in every part of the world, in every subject area. It is difficult to find a text on instructional methods, a teacher's journal, or instructional materials that do not discuss collaborative learning. Materials on collaborative learning have been translated into different languages. Collaborative learning changes trainees and trainers roles in classrooms. The ownership of teaching and learning is shared by groups of trainees, and is no longer the sole responsibility of the trainee.

The authority of setting goals, assessing learning, and facilitating learning is shared by the group. Trainees have more opportunities to actively participate in their learning process, questioning and challenging each other, sharing and discussing their ideas, and internalizing their learning. Along with improving educational learning, collaborative learning helps trainees engage in thoughtful discourse and examine different perspectives, and it has been proven to increase trainees self-esteem, motivation, and empathy.[59]

[58] Fundacja Instytut Badan i Innowacji w Edukacji http://Inbie.Pl

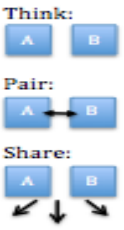
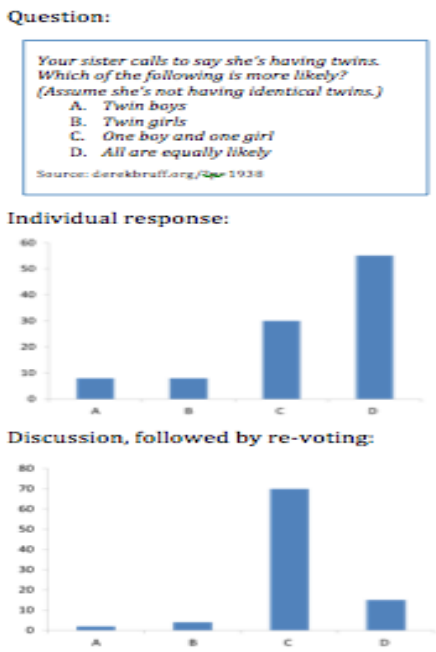
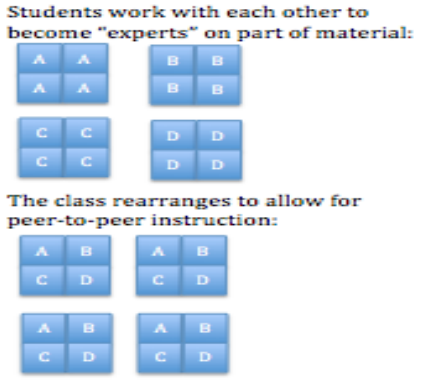
[59] https://www.teachervision.com/professional-development/cooperative-learning

When implemented well, collaborative learning encourages achievement, learner discussion, active learning, learner confidence, and motivation. The skills trainees develop while collaborating with others are different from the skills trainees develop while working independently.

Engaging environments are been created not only for collaborative learning but also in the workplace. Firms organize employees into teams and task forces, the skills necessary to be a "team player" (e.g., verbalizing and justifying ideas, handling conflicts, collaborating, building consensus, and disagreeing politely) are becoming more valuable and useful. Using collaborative groups to accomplish educational tasks not only provides opportunities for trainees to develop interpersonal skills but also gives them authentic experiences that will help them be successful in their jobs[60].

Choosing a self-education path is a function of the "game" that an individual has been playing since childhood with the educational system and social system available to him, his own anticipation of the future and possible reality, with himself - searching for self-knowledge, establishing adequate self-esteem, becoming aware of one's own identity, own ideals and life plans . Education has a special role in this respect, which should contribute to shaping the self-educational attitude into a collaborative learning environments where the self-education is a motor for better running a educational goal.

[60] https://www.teachervision.com/professional-development/cooperative-learning

Examples of informal cooperative learning activities		
Think-pair-share	The instructor asks a discussion question. Students are instructed to think or write about an answer to the question before turning to a peer to discuss their responses. Groups then share their responses with the class.	
Peer instruction	This modification of the think-pair-share involves personal response devices (e.g., clickers). The question posted is typically a conceptually based multiple-choice question. Students think about their answer and vote on a response before turning to a neighbor to discuss. Students can change their answers after discussion, and "sharing" is accomplished by the instructor revealing the graph of student responses and using this as a stimulus for large class discussion. This approach is particularly well-adapted for large classes.	
Jigsaw	In this approach, groups of students work in a team of four to become experts on one segment of new material, while other "expert teams" in the class work on other segments of new material. The class then rearranges, forming new groups that have one member from each expert team. The members of the new team then take turns teaching each other the material on which they are expert.	

Setting up and facilitating group work[61]

Some challenges of using collaborative learning include releasing the control of learning, managing noise levels, resolving conflicts, and assessing trainees learning. Carefully structured

[61] Brame, C.J. and Biel, R. (2015). Setting up and facilitating group work: Using cooperative learning groups effectively. Retrieved [13.02.2021] from http://cft.vanderbilt.edu/guides-sub-pages/setting-up-and-facilitating-group-work-using-cooperative-learning-groups-effectively/

activities can help trainees learn the skills to work together successfully, and structured discussion and reflection on group process can help avoid some problems. now an accepted and highly recommended instructional procedure.[62]

In classrooms where trainees are not familiar with working together in small groups, the trainer should start with short, highly-structured activities. It could take time to develop a respectful and safe classroom community. Successful collaborative groups depend on trainees who respect each other, listen to one another, and feel safe enough to share their thoughts and feelings.

The trainer can help trainees learn the skills needed to work in groups by starting with short, structured lessons aimed at fostering turn-taking, involving all trainees in the discussion, and clarifying the roles, rights, and responsibilities of group members.

When beginning to use collaborative learning with trainees, it is also important to establish team norms.

Team norms are guidelines or rules governing how group members agree to work together. Norms for working in groups tend to be very different from traditional classroom norms. For example, in a traditional classroom, trainees complete their own work. In collaborative classrooms, trainees work with others to complete tasks. Have trainees discuss and develop the norms that they will follow during group work. Team norms, if designed well, can help to create a safe and supportive atmosphere.

Some examples of team norms include[63]:

- treat one another with respect.
- encourage new ideas and value the consideration of all suggestions.
- justify our opinions to the team.
- make decisions as a team.

[62] http://www.co-operation.org/what-is-cooperative-learning

[63] https://www.teachervision.com/professional-development/cooperative-learning?page=2

Exercise:

Topic: Creating an Engaging Learning Environment

1. In your class, make small groups [3-4 people].
2. Make learners to choose team leaders [one per each group]
3. Write a number on a piece of paper and ask the group leaders to try to guess the number the trainee wrote.
4. The group that guesses the number will be chosen for the exercise. The others will look at how to create a "discussion group".
5. One way to introduce collaborative groups is to work with one group to get started, and allow the rest of the trainees to watch the chosen group as they engage in a discussion

[discussion topic: collaborative learning or self-learning, that is the question"]

6.3 Promoting Engagement and Relevancy Through Project-Based Learning

You're not directly "teaching" when collaborative learning occurs. Instead, you're ensuring groups of trainees stay on task. You know first-hand just how easy it is for trainees to get off-topic and start socializing instead of working together in a social setting.

With that in mind, it's crucial that you keep an ear to the ground for the entire classroom when they're broken into groups. Can you be everywhere at once? No. But you can enlist the aid of another trainer, listen for the tell-tale signs of off-topic behaviour (laughter, loud noises, etc.), or break trainees into large, easy-to-manage groups to monitor them more effectively.

You can also create a list of specific collaborative learning strategies that you want to use with your trainees. That way, you constantly have another strategy in the hopper for whenever your trainees wrap up one activity and move onto the next!. Plus, once you have those strategies in play, you can create a structured approach to collaborative learning in your classroom that makes it exceptionally hard for trainees to goof off, lose focus, or go off-topic.

Trainees should be grouped for instruction to maximize opportunities to learn, and the type of grouping can produce different results based on the circumstances. Establish groups using a variety of criteria, such as social skills, academic skills, learner interests, and instructional objectives. Select the academic and collaborative objectives.

For example, trainees will present their opinion of a candidate, supported with facts. Trainees will work collaboratively in groups of three - four, taking turns when talking. Trainers should model positive interpersonal skills, have trainees practice the skills, and encourage the trainees to reflect on how effectively they are performing the skills.[64]

Challenging Group Dynamics

Like all groups of people trying to work together, adult learners groups sometimes run into difficulties. Be proactive and have ways prepared to prevent or solve problems.

Some suggestions include:

- Brainstorm how groups could handle a specific difficult situation, such as one person not letting others talk. Have each group come up with a solution to the problem.
- Use a checklist to help trainees resolve conflicts. The checklist could have trainees assess how they are listening to each other, working together, and respecting each participant.
- Give clear written guidelines for each learner role. Make sure that roles are clear before the activity begins.
- Establish a specific signal if the noise level is too high. Award points to each group for working quietly.
- Have trainees use their journals to record how they would like their group to implement a specific collaborative skill. For example, if trainees know that the collaborative skill they will work on in their small group is "disagreeing nicely" they could write down what they could say. They could also reflect on why that skill is important to them and to the group.

How Can You Stretch This Strategy?

As trainees become more familiar with collaborative group structures, have them take more ownership of the process. Have trainees determine how to break into groups, determine their group needs, and create and assign trainees roles. Trainees can create a list of collaborative and other social skills that they think could be improved, and develop a plan to work on those skills in their groups.

[64] https://www.teachervision.com/professional-development/cooperative-learning?page=2

As groups begin to develop, have trainees reflect on how the group is functioning. Have trainees discuss their group's progress in interpersonal skills, and have them problem-solve the challenging dynamics of the group. This type of reflection will help trainees develop their metacognition and articulation skills. Trainees can reflect on their contributions to the group and monitor their own progress either as part of a discussion or in a written reflection.

In groups that stay together over a long period of time, and as trainees become familiar with each other's strengths and challenges, they should be given more autonomy in choosing roles and developing a process for completing the task. Encourage trainees to think about how they are progressing as a group and the challenges that they face, as well as how they are progressing academically and how to improve the quality of their work as a team.

When Can You Use It?

Collaborative learning can be used in any class at any level with any subject area. Collaborative learning works well when it is a part of the culture of a classroom, and when trainees are familiar with working together and know what is expected of them. The following are some ideas for using collaborative groups in your classroom.

Some examples where to use collaborative learning:

Reading/English: Use collaborative groups during partner reading. Have trainees read silently and then take turns reading aloud. The listener can guide the reader when necessary. Use collaborative groups after Sustained Silent Reading. Have trainees gather in groups to summarize what books or chapters they read. This also could be a time for trainees to "sell" the book they are reading and encourage others to read it as well.

Writing: Use collaborative groups during the writing process to brainstorm topics, to pre-write, and during peer review conferences. Use collaborative groups to write a "how-to" piece. Trainees, in groups, can write about how to make a model or drawing, exchange what they've written with another group, and collaborate to make the model or drawing. Have trainees read texts and use a double-entry journal to list critical points and their responses. They can exchange their double-entry journals and create a summary of the assigned readings with a partner.

Math: Use collaborative groups to practice problem-solving strategies. Have pairs use manipulatives to act out a problem. After solving a math problem, trainees can explain their thinking to a partner. In collaborative groups, trainees can decide on a set of criteria to categorize geometric figures, and then explain their criteria to other groups.

Social Studies: Use Jigsaw to review concepts and prepare for a test. In jigsaw groups, have trainees list important skills or concepts that are important enough to be on the test. In expert groups, have them write review questions. Then have trainees return to jigsaw groups to ask their two or three best questions, giving others in their group a chance to answer.

Science: Use collaborative groups to create and discuss hypotheses before completing experiments. Trainees can combine their prior knowledge about a topic and collaborate to make an educated guess[65].

Exercise:

Topic: Project based learning

Make some small groups [3-4 people] and choose a collaborative skill they will work on in their small group. Example: disagreeing nicely to the following affirmation:

“Pets should not be allowed to make noise after 10 PM"

- Each group will work for 15 minutes on this topic
- Each group must write down in a poster what they could say
- The groups also reflect on why that skill [**disagreeing nicely**] is important to them and to the group.
- The group chooses a leader that will present what they have discussed and written in the poster to the class.

6.4 Engaging Learners Through Research and Applications

This learning unit collects information about Free, web based tools and resources that can help trainers and learners to conduct participatory learning more efficiently or creatively.

Collaboration is a key competence of the knowledge society for the 21st century. [66] Recommendations for 21st century education, it is emphasized that collaborative learning is the main strategy of lifelong learning, because an individual cannot be forced to continuously learn in institutionalized forms of education. It is also not without significance that contemporary

[65] https://www.teachervision.com/professional-development/cooperative-learning?page=3

[66] Ochoa Siguencia, Luis & Gómez-Ullate, Martin & Herman, Damian. (2015). Use of online collaborative writing tools by trainees of higher education.

educational paths, personal and professional development are highly individualized, therefore standard educational services are not able to meet the specific needs of an individual. Self-study opportunities are strengthened by modern educational means such as computers and the Internet. [67]

Consequently, it becomes necessary to redefine the so-called key skills, the possession of which determines active participation in the structures of a modern information society (knowledge society). These are: the ability to learn quickly, creativity, communication skills, in particular knowledge of foreign languages, proficiency in using modern information and telecommunications technologies, knowledge of new techniques for acquiring, collecting and processing information, as well as new social skills, such as the ability to work in a group (nowadays no worthwhile result is achieved in isolation), the ability to flexibly adapt to changing situations and the ability to make decisions with the assessment of justified risk.

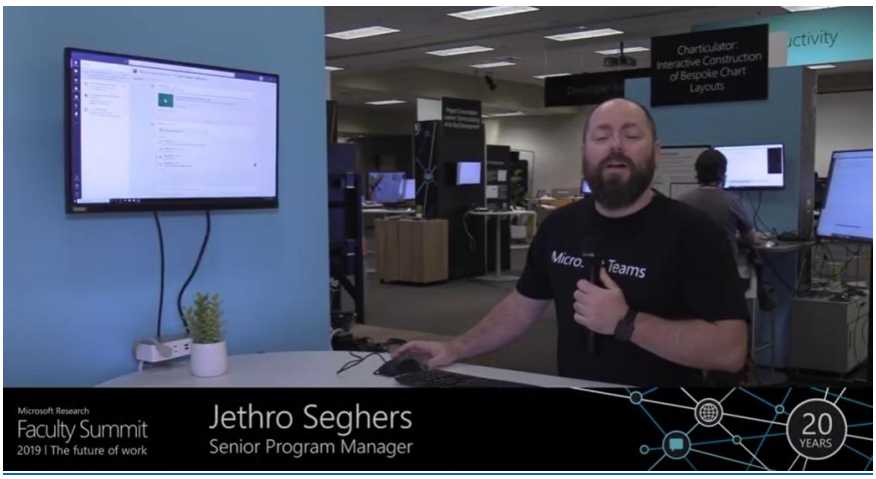
There are different ways to learn using online tools. Here are some of the most popular of them:

- E-learning training and courses - allowing individual learning via the Internet.
- "Internet conferences, lectures conducted " live ".
- "Audiobooks, or listening books available on the Internet or on CDs.
- “Podcasts, which are cyclical radio plays recorded by specialists in a given field, journalists, politicians, available in electronic version for download to a portable MP3 player or simply for listening on a computer.
- “E-mails that are used not only for communication (e.g. with a trainer or other training participants) but also for transferring training material.
- "Communicators (e.g. Skype), which are successfully used to learn a foreign language or for individual consultations with a trainer

[67] Ibidem.

Digital Research Tools

Search like a pro by using openly-available tools for finding research materials, including specialized search engines, open content collections, shared bookmarks, and more is the objective when engaging learners through research and internet applications.



Microsoft Teams: Collaborate with Any Researcher Anywhere

https://youtu.be/hG9tqPF0UGw

Following, we describe some digital research tools available on the web to promote learners engagement:

- ASANA[68] A work management platform teams use to stay focused on goals, projects and daily tasks
- AnkaSearch[69]: "AnkaSearch is a Meta Search and Deep Web Search Desktop tool. Apart from searching for pages, AnkaSearch also enables you to save selected downloaded pages, organize and manage the saved pages." (Free, Windows)
- BASE[70]: "multi-disciplinary search engine for academically relevant web resources."

[68] https://asana.com

[69] http://www.ankasoftware.com

[70] http://www.base-search.net

- BlueOrganizer[71]: "BlueOrganizer adds a button to your toolbar with a menu that has been automatically personalized based on your browsing history. This menu contains contextual shortcuts to make all relevant information for books, music, movies, wines, recipes, stocks, and more just 1-click away." (Free, Firefox add-on)
- CiteULike[72]: "a free service for managing and discovering scholarly references"--find scholarly resources other researchers have added to their bibliographies (Free, web-based)
- DeeperWeb[73]: Firefox add-on that provides faceted Google searches. Offers a tag cloud view, blog search, search of articles and other resources, etc. (Free, browser-based)
- DOAJ[74]: Directory of Open Access Journals, "The Directory aims to be comprehensive and cover all open access scientific and scholarly journals that use a quality control system to guarantee the content." (Free, web-based)
- Dispute Finder[75]: Firefox extension that allows "activists" to annotate disputed claims on web pages and "readers" to see those annotations and discover other points of view. (Free, Firefox add-on)
- Findings[76]: A research assistant and lab notebook in one app.
- Freebase[77]: "provides datasets about millions of things, from movies to dog breeds to beers of the world. These datasets are built by the community, for the community." (Free, web-based)

[71] http://www.adaptiveblue.com

[72] http://www.citeulike.org

[73] https://addons.mozilla.org

[74] http://www.doaj.org

[75] http://disputefinder.cs.berkeley.edu/thinklink

[76] https://findingsapp.com

[77] http://www.freebase.com

- Google Books[78]: can search a large and growing collection of digitized books [review] (Free, web-based)
- Google Scholar[79]: "can search across many disciplines and sources: peer-reviewed papers, theses, books, abstracts and articles, from academic publishers, professional societies, preprint repositories, universities and other scholarly organizations" (Free, web-based)
- Internet Archive[80]: Offers extensive collections of texts, audio, moving images, and software as well as archived web pages .(Free, web-based)
- Library LookUp[81]: "Bookmarklets for looking up catalog records from book-related sites." (Free, bookmarklet)
- LibX[82]: "a browser plugin for Firefox and Internet Explorer that provides direct access to your library's resources. " (Free, browser plug-in)
- Microsoft Teams[83]: Teams brings everything together in a shared workspace where you can chat, meet, share files, and work.
- OAIster[84]: "union catalog of digital resources...can be searched by Title, Author/Creator, Subject, Language or Entire Record" (Free, web-based)
- Referencecenter[85]: a mashup of various reference and research information that provides a deep dive into a given topic.

[78] http://books.google.com

[79] http://scholar.google.com

[80] http://www.archive.org

[81] http://weblog.infoworld.com

[82] http://libx.org

[83] https://www.office.com

[84] http://www.oaister.org

[85] http://referencecenter.com

- Scholarometer[86]: Firefox extension that supports citation analysis. Offers a "smart interface" to Google Scholar. (Free, Firefox extension)
- SearchPigeon[87]: search open access publications in the humanities (Free, web-based)
- SearchTeam[88]: collaborative search engine (Free, web-based)
- Worldcat[89]: a union catalog that searches collections of over 10,000 libraries worldwide (Free, web-based)

Blogs

Blogs (web logs) are online diaries. Trainers and researchers are using blogs to communicate initial research results, try out ideas, reach audiences beyond academia, and more.

To encourage conversation and interaction, blogging software typically provides tools for commenting, blogrolls (links to other blogs the author likes), RSS feeds (for subscriptions), etc.

How to make a blog - Quick & Easy!

https://youtu.be/NdVHrTRD3wU

You can download and install blogging software on your own server, or pursue a hosted solution. Within the most common tools we can find:

[86] http://scholarometer.indiana.edu

[87] http://www.searchpigeon.org

[88] http://searchteam.com

[89] http://www.worldcat.org

- Anthologize[90]: transforms WordPress 3.0 into a platform for publishing electronic texts. Grab posts from WordPress blog, import feeds from external sites, or create new content directly within **Anthologize** (Open source, WordPress plug-in)
- Blogger[91]: a blogging site accessible through a Google account; includes features like comments, access controls, and blogger profiles (Free, web-based)
- EduBlogs[92]: a blogging site that hosts hundreds of thousands of blogs for trainers, trainees, researchers, librarians, administrators and anyone and everyone else involved in education" (Free, web-based)
- LiveJournal[93]: a website that serves as both a blogging community and a personal journal (Free, web-based)
- WordPress[94]: free hosted blogging solution that uses open source blogging software.
- Tumblr[95]: a blog that lets post text, photos, quotes, links, music, and videos, from your browser, phone, desktop, email, or wherever you happen to be. (Free, web-based)
- Posterous[96]: a simple way to put anything online using email. Post text, photos, audio, and files (Free, web-based)

Brainstorming

Mind-mapping tools that encourage creative thinking and the rapid generation of ideas are useful when brainstorming.

[90] http://anthologize.org

[91] https://www.blogger.com

[92] http://edublogs.org

[93] http://www.livejournal.com

[94] http://wordpress.org

[95] http://www.tumblr.com

[96] http://posterous.com

Brainstorming Techniques: How to Innovate in Groups

https://youtu.be/YXZamW4-Ysk

Within the most common tools we can find:

- Bubbl.us[97]: "a simple and free web application that lets you brainstorm online" (Free, web-based)
- Exploratree[98]: "free web resource where you can access a library of ready-made interactive thinking guides, print them, edit them or make your own" (Free, web-based)
- FreeMind[99]: Java-based mind mapping software (Free, cross-platform)
- FlashCardMachine[100]: possibility to create interactive web-based study flash cards and share them with others learners (Free, web-based)
- MindMeister[101]: brings the concept of mind mapping to the web, using its facilities for real-time collaboration to allow truly global brainstorming sessions (Free, web-based)

[97] http://bubbl.us

[98] http://www.exploratree.org.uk

[99] http://freemind.sourceforge.net

[100] http://flashcardmachine.com

[101] http://www.mindmeister.com

- Text2mindmap[102]: web application that converts texts to mind maps. It takes a structured list of words or sentences, interprets it, and draws a mind map out of them (Free, web-based)
- Webspiration[103]: online visual thinking tool, create bubble diagrams, flow charts, concept maps, process flows and other visual representations that stimulate and reflect your thinking... you can take notes, organize work and expand ideas fluidly to develop your writing into plans, study guides, papers, reports, and other more comprehensive documents (Free, web-based)
- Vue[104]: the VUE project is focused on creating flexible tools for managing and integrating digital resources in support of teaching, learning and research. (Free, multi-platform)
- CMAP Tools[105]: is an online knowledge modelling kit; it includes some interesting articles on concept mapping, etc. (Free, web-based)

You should choose one that better suits your needs and the learners' needs!

Collaborative Teaching/Learning Software

The collaborative teaching and learning software are designed to help learning communities involved in a common task achieve their goals. Includes tools to facilitate communication, conferencing, collaborative writing, sharing of resources, project management, and more.

Within the most common collaborative teaching-learning software we have "Collaborative Authoring". Collaborative Authoring involves the use of a web-based tool to create a document (word processing file, wiki page, presentation, spreadsheet, etc.), which can be edited by the multiple members of a group. It allows learners to avoid emailing documents back and forth and keeping up with many different versions. The group can easily publish the document online. Take advantage of many of the word processing features that they are familiar with--formatting options, spell checking, etc.--without being tied to a single computer.

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[102] http://www.text2mindmap.com

[103] http://mywebspiration.com

[104] http://vue.tufts.edu/index.cfm

[105] http://cmap.ihmc.us/conceptmap.html

Most popular Collaborative Authoring are:

- Google Docs[106]: allows you to author and share documents, spreadsheets, and presentations online (Free, web-based)
- Dropbox[107] - consists in providing storage space on the servers of the company. Sending, viewing and downloading of data is possible via a simple browser or a dedicated application installed on your computer.
- MediaWiki[108]: wiki software originally used with Wikipedia (Open source, requires web server such as Apache or IIS)
- TiddlyWiki[109]: a complete wiki in a single HTML file. It contains the entire text of the wiki, and all the JavaScript, CSS and HTML goodness to be able to display it, and let you edit it or search it -- without needing a server (Free, cross-platform)
- TitanPad[110]: collaborators write and edit a document simultaneously (Free, web-based)
- TypeWith.me[111]: simple online collaborative writing tool; edits by each co-author are assigned a colour; can revert to previous versions of document (Free, web-based)
- Wiggio[112]: web-based collaboration platform that supports messaging, web meetings, shared calendars, polls, project management, and shared files. (Free, web-based)

[106] https://www.google.com

[107] https://www.dropbox.com

[108] http://www.mediawiki.org

[109] http://www.tiddlywiki.com

[110] http://titanpad.com

[111] http://typewith.me

[112] http://wiggio.com

- Wikidot[113]: wiki-building site: users can edit content, upload files, communicate and collaborate (Free, with Pro accounts available; web-based)
- Writeboard[114]: shareable, web-based text documents that let you save every edit, roll back to any version, and easily compare changes (Free, web-based)
- Zoho[115]: suite of online applications including email, document authoring, notetaking, presentations, spreadsheets, etc (Free, web-based)
- Etherpad[116]: a Realtime Multiplayer Notepad in your Browser lets people collaborate on text in really real-time" (Free beta and pending commercial version, web-based)
- Pbworks : This free of charge platform for educational purposes, creates interactive lessons where participants contribute to the content on your wiki. Trainers and trainees can create, publish and post their work. In conclusion, on this collaborative workspace, all participants can edit the page and contribute to the content on the workspace

Exercise:

Create groups of 3-4 people that would work in a pre-defined topic [example: My favourite dessert]

- The trainers will create an account in Google drive [https://drive.google.com] and share the access link to one folder to the learners.
- The learners must go to the shared link and create a blog using Google sites [https://sites.google.com]
- The learners will use this collaborative workspace to edit and comment on other participant's work, work collaboratively and have easy access to a variety of links.

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[113] http://www.wikidot.com

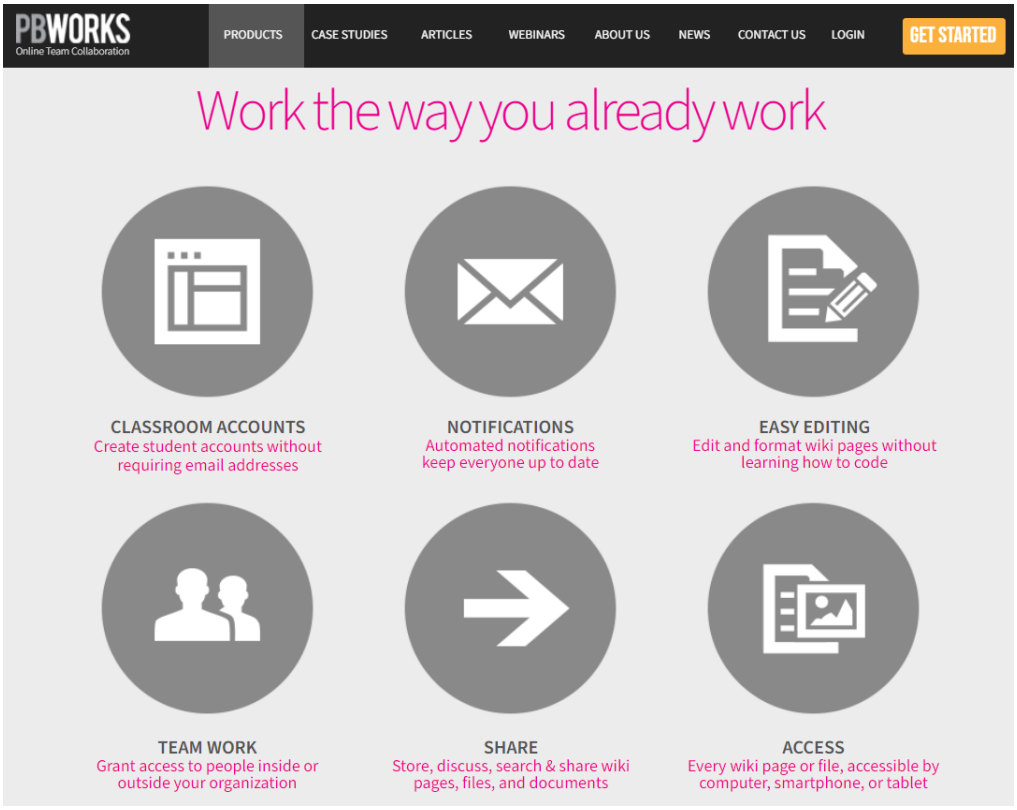
[114] http://www.writeboard.com

[115] http://www.zoho.com

[116] http://etherpad.com

6.5 Managing a Collaborative Learning Environment- PbWorks Platform

PBworks allows multiple users to create and edit a website without any special software or web-design skills. The owner(s) of the wiki can track changes, moderate comments, and control who has access to the wiki

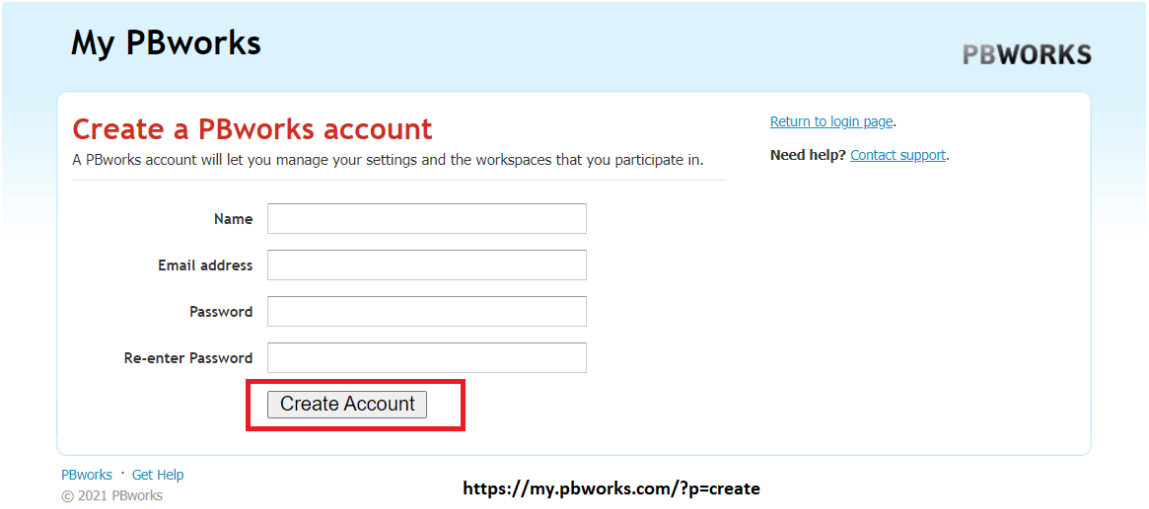


Print screen from: https://www.pbworks.com/education.html

Setup and Access

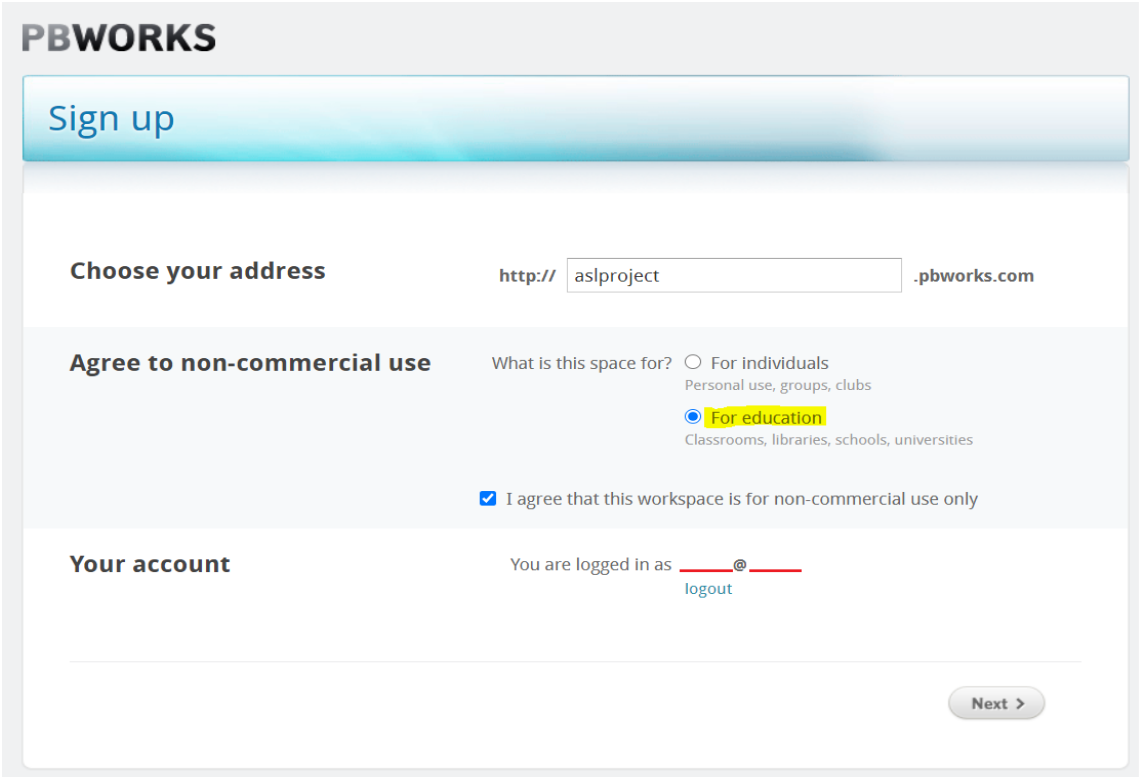
To create a new wiki, you should first create an account or work in the trainer's' wiki.

Remember that Pbworks is free of charge when used for educational purposes.



Print screen from: https://my.pbworks.com/?p=create

Go to http://my.pbworks.com and click the Sign Up link. Enter your name, email address, and password and click „Create Account".



Print screen from: https://plans.pbworks.com/signup/basic20

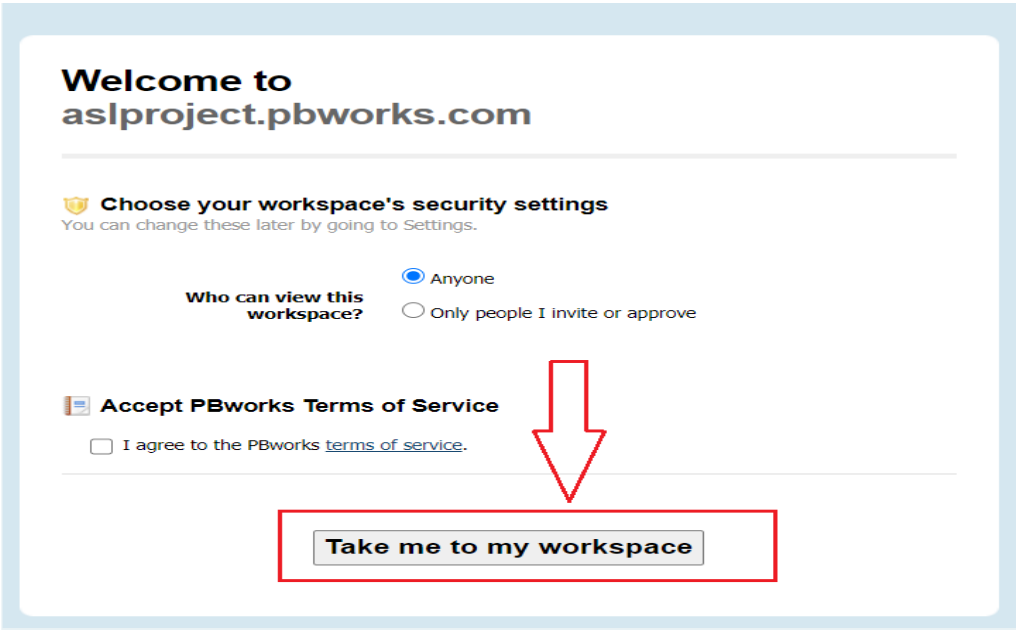
Next, check your email account for a confirmation email from PBworks. Check your Spam/Junk filter if you don't see it in your inbox. Click the link in the confirmation email to complete your account creation

.

Print screen from: https://my.pbworks.com/

After confirming your email address, follow these steps to set up your wiki:

- Click the Home tab in the top-left corner.
- Click the Create a workspace link.
- Select the Basic plan on the next screen.
- Name your workspace and fill in the other required information. Click next.
- Select the kind of access you would like other users to have on your workspace.
- Click Take me to my workspace.



Edit the Landing Page

In the upper-left corner of a page, click the Edit button to view the page editing interface. Page content should appear below a text-editing and formatting toolbar similar to those used in Microsoft Word.

Make sure to click the Save button at the bottom-left of the page when you are finished editing. Alternatively, you can click the Cancel button to prevent any of your changes from being saved.

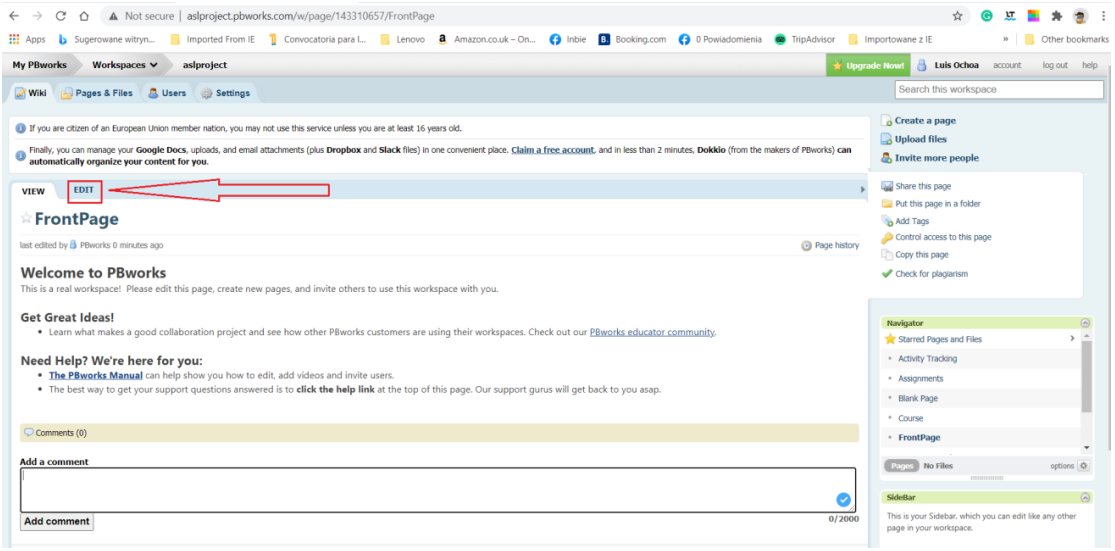


Figure 4: Editing the wiki

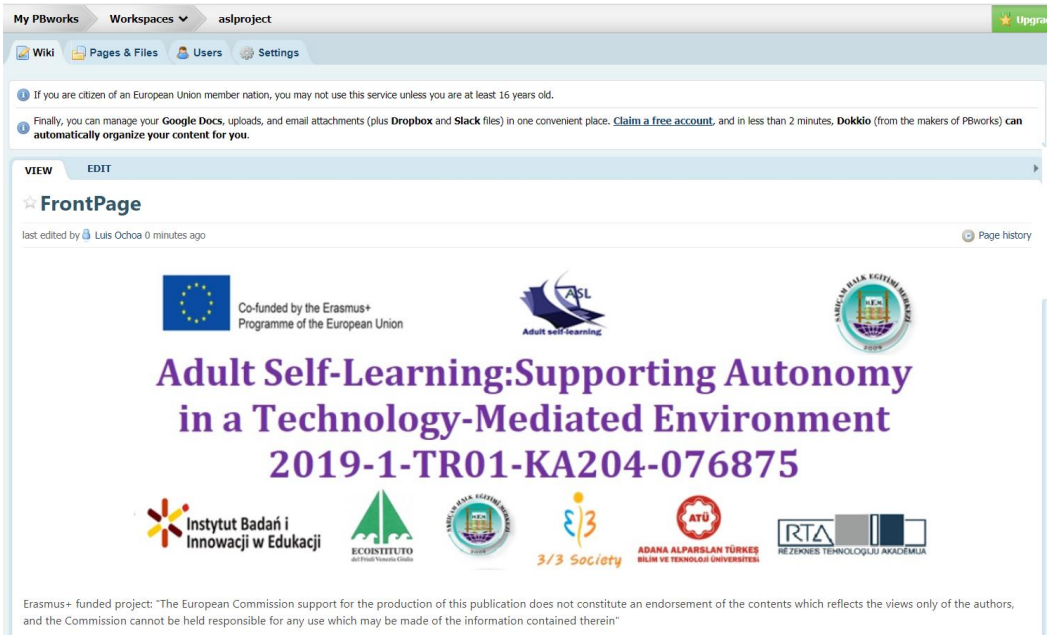
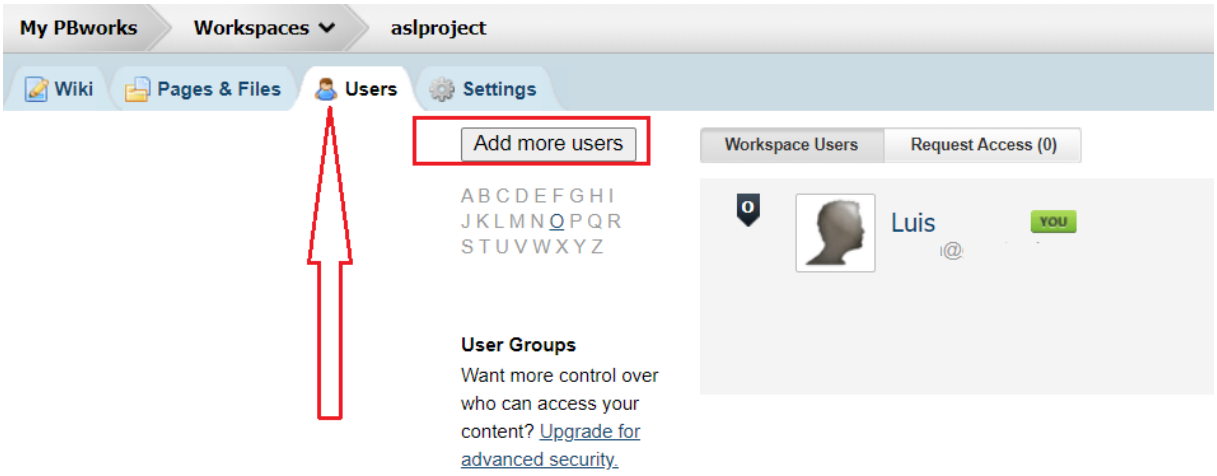


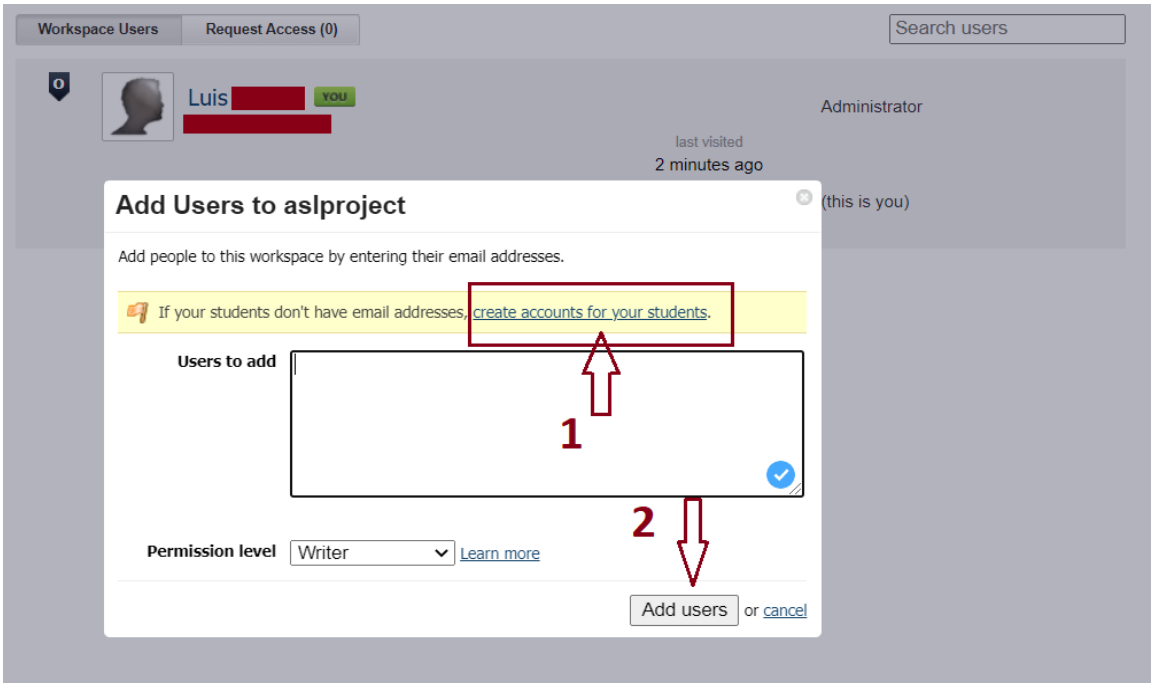
Figure 4: Editing the wiki [part 2]

Add Users

To share access as a writer, scroll down to the bottom of your right panel, and enter the user's e-mail address into the Add a new writer to the wiki field.

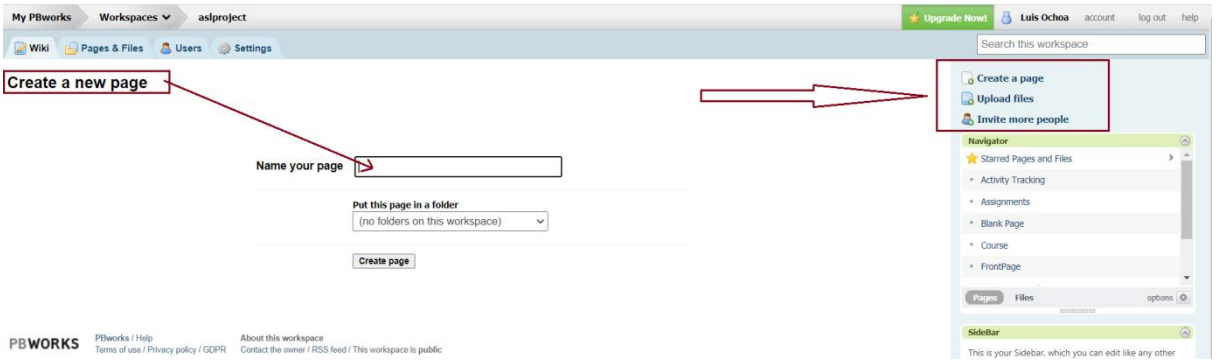


You can also go into "Settings" at the top-right of your wiki and then select "Users" to add users with other access levels.



Create a New Page

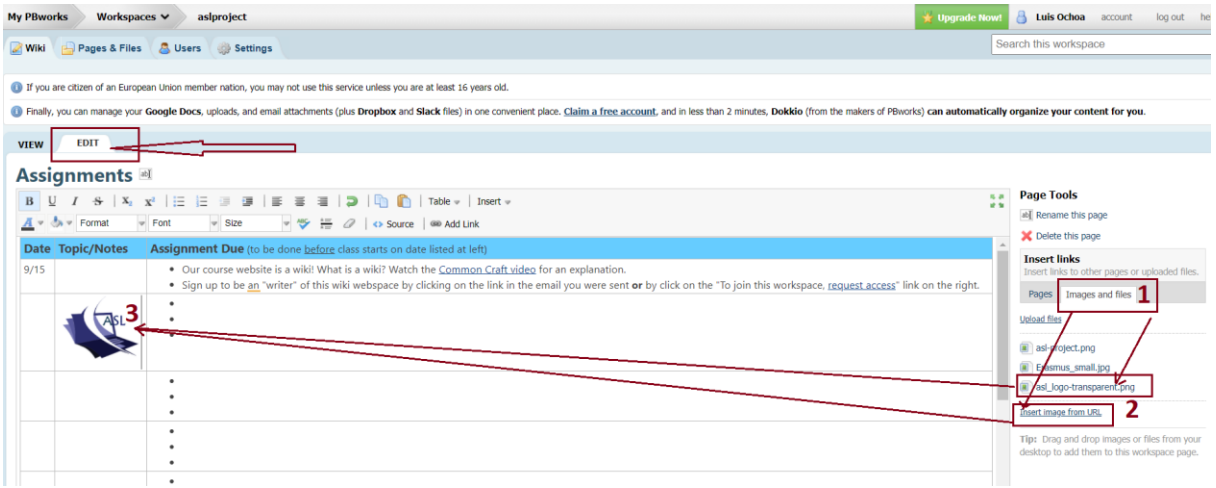
- In the top-right corner of your wiki, click the Create a page link.
- On the next page, name your page and click Create page.
- You can also create pages in the Pages & Files manager. Click the Pages & Files link in the top-right of a page to get to the Pages & Files manager.



Creating a new page

Add an image to a page.

Enter the Edit view for the page you want to add an image to. To add an image from your computer, click Images and files under Insert links on the right side of the page.



Click Upload files and navigate to the image you want to upload and click Open.

The image will be listed under the Images and files tab on the right. To insert the image, place your cursor where you want the image and click the name of the image you uploaded in the menu on the right.

This will insert the picture where you set the cursor. Click Save in the bottom-left corner to save your changes.

Create a link to another page

Enter the Edit view for the page on which you want to create a link.

Place your cursor where you want to insert the link.

Under the Pages tab, click the name of the page you want to link to. The link will be inserted wherever your cursor was placed on the page you are editing.

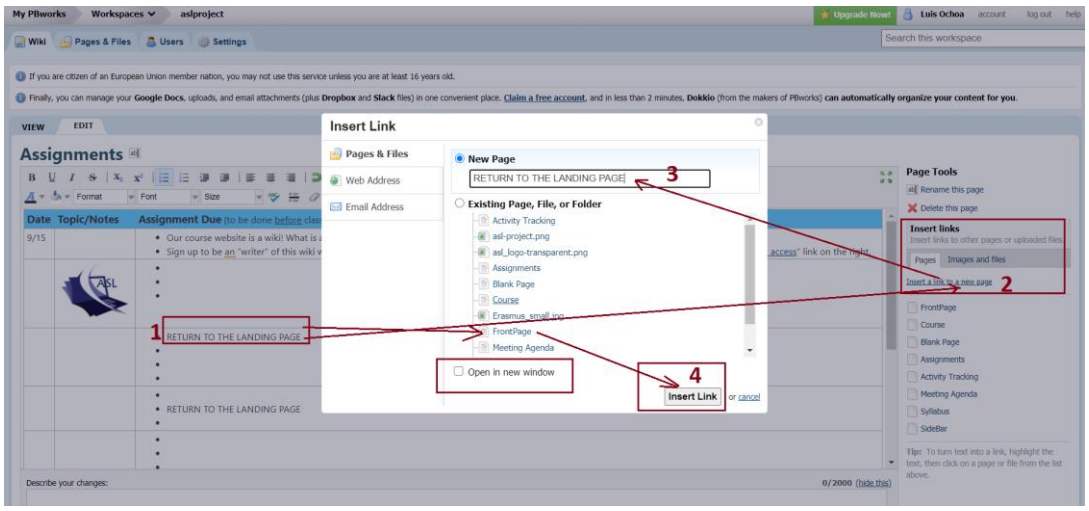


Figure 4: Adding a link to a Web Site

Tracking Changes

Navigate to the page for which you want to see the revisions and click Page History. Here you will be able to view changes to a page and compare within different versions.

You will be presented with a list of revisions. These dates and times represent every time the page has been changed and saved. Click the date and time of the revision you want to see.

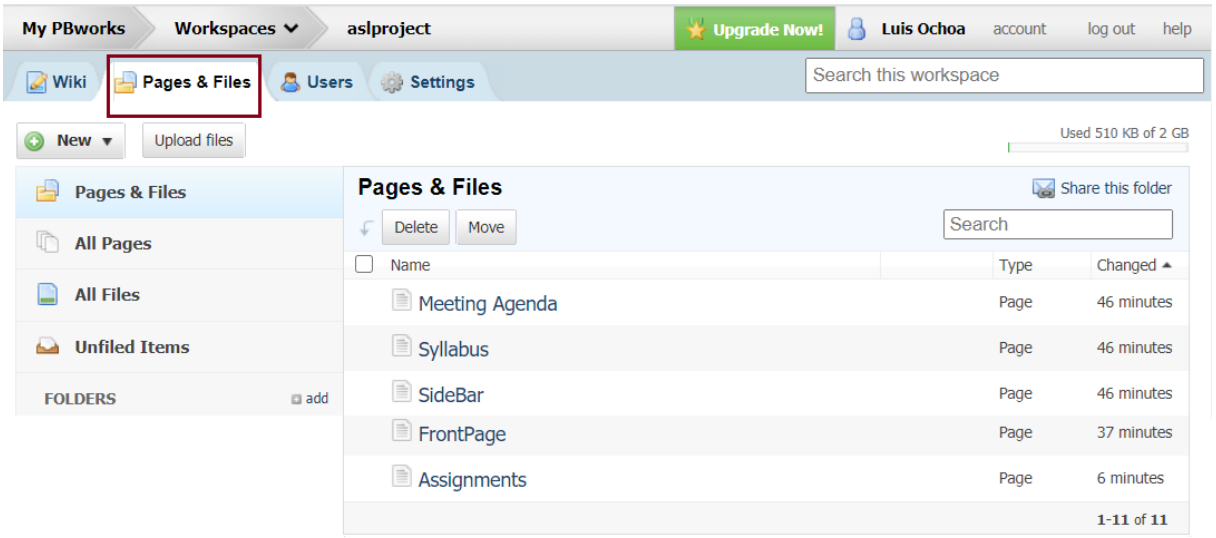


Figure 5: History of PbWorks page changes

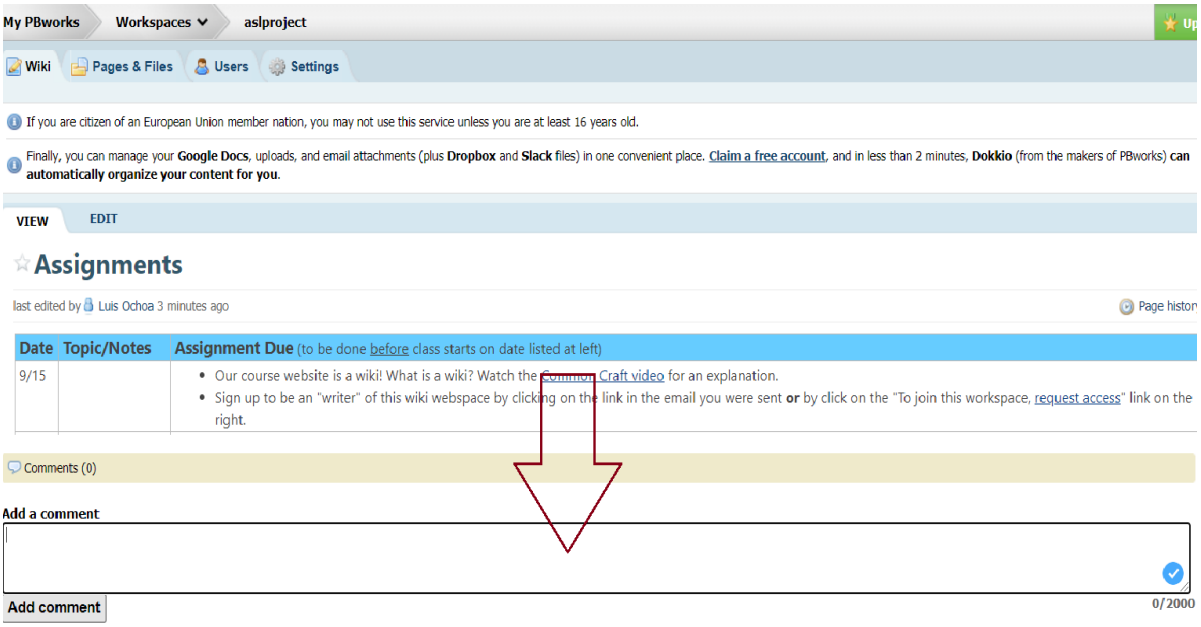


Figure 6:Add comments

Exercise:

http://aslproject.pbworks.com = link to the ASL PbWorks

- Learners should choose their institution or country to practice and create their own web page.
- Give learners the username and password for a PbWorks

Name	Permission	Username	Password
PL	Writer	pl	pl13 4 #
IT	Writer	it	pl13 4#
TR	Writer	tr	p pll134#
GR	Writer	gr	pl13 4 #
LV	Writer	lv	pl13 4#
Guest	Writer	guest	p pll134#

Topic of webpage: “Handcrafts in my region”

Additional Resources

- Use of online collaborative writing tools by students of higher education: https://www.researchgate.net/publication/289460617_Use_of_online_collaborative_writing_tools_by_students_of_higher_education
- Creating effective online collaborative learning groups at higher education institutions: https://www.researchgate.net/publication/292962563_Creating_effective_online_collaborative_learning_groups_at_higher_education_institutions
- Online collaborative learning: the EsCAlADE training experiment: https://www.researchgate.net/publication/323394298_Online_collaborative_learning_the_EsCAlADE_training_experiment
- Online work-space-shared management to support collaborative learning: https://www.researchgate.net/publication/323398305_Online_work-space-shared_management_to_support_collaborative_learning
- Crowdsourcıng solutıons for supportıng collaboratıve learnıng: a case of undergraduate management students: https://www.researchgate.net/profile/Luis-Ochoa-Siguencia/publication/334490865_CROWDSOURCING_SOLUTIONS_FOR_SUPPORTING_COLLABORATIVE_LEARNING_A_CASE_OF_UNDERGRADUATE_MANAGEMENT_STUDENTS/links/5d2dc85f299bf1547cbb728e/CROWDSOURCING-SOLUTIONS-FOR-SUPPORTING-COLLABORATIVE-LEARNING-A-CASE-OF-UNDERGRADUATE-MANAGEMENT-STUDENTS.pdf
- Creating, Sharing, and Accessing Collaborative Documents Using Google Suite Apps: https://youtu.be/0HFZ8oXrxMw
- Using Google Slides as a Collaborative Learning Tool: https://youtu.be/UIGiAyFO0gc
- Using Google Jamboard as a Collaborative Learning Tool: https://youtu.be/OXMgEo235kQ
- Using Google Docs as a Collaborative Learning Tool: https://youtu.be/LBYpZbfk1YQ
- Cooperative Learning Model: Strategies & Examples: https://youtu.be/cnkKHL_dyGE
- Collaborative Learning at Maastricht University: https://youtu.be/XUJQWr39DsI

About the Partner Organisations

Saricam Public Education Center is a public institution founded in 2009 in Adana, Turkiye and affiliated to the Ministry of National Education, Directorate General for Lifelong Learning. Saricam HEM provides training services throughout the year, including weekends and evenings and carries out tasks in accordance with the principles and objectives of non-formal education. Sarıçam HEM offers non-formal educational activities in collaboration with a great number of government and private institutions, as well as volunteer organisations. Its primary responsibilities include implementing training activities, as well as assisting and monitoring training activities.

Adana Alparslan Türkeş Science and Technology University (Adana ATSTU) is a relatively young higher education institution established in 2011 in Adana located in the south of Turkey and is the pivotal city incorporating industrial and agricultural activities in the region. The university consists of 8 faculties, the school of foreign languages, institute of social sciences, institute of natural & applied sciences, 1 continuing education center supporting lifelong learning and a Turkish Language Education Center that helps its international students gain an insight into Turkish language and culture during their study period. Adana ATSTU has around 3000 undergraduate and 1000 graduate students and 100 doctorate students.

Ecoistituto del Friuli Venezia Giulia was established in 1989 and is located in Udine. It is a research non-profit organization specialized in sustainable development. Its main research scopes are:

1) Digital Social Innovation

2) Innovative teaching-learning methodologies

3) Special needs education

4) Social robotic

Foundation "Research and Innovation in Education Institute" [INBIE] is an NGO Institution situated in Czestochowa – Poland, founded in 2014. INBIE promotes equal educational opportunities to all social groups, and fights against social exclusion and supports adult people at risk of marginalization. INBIE cooperates closely with formal and non-formal educational Institutions, local authorities, and Czestochowa Centre of Non-Governmental Organisations to develop adults' new skills to increase their chances of a successful return to work and search for better life chances. Staff from INBIE do research and work in entrepreneurship, management, use of ICT in Education and workplace aiming to improve adult people's professional and entrepreneurial competencies for creating new services and business to fight against unemployment and social exclusion.

Three Thirds Society The Non-Profit Organization (NPO) "THREE THIRDS SOCIETY" with the distinctive title "3/3 SOCIETY" has been established in 2010 by people with various professional backgrounds, but common goals, visions and principles regarding social cohesion and the support of vulnerable social groups. The organization undertakes initiatives in economic, political and legislative level to address issues of social exclusion, promote gender equality and combating all forms of discrimination. NPO "THREE THIRDS SOCIETY" has extensive experience in Supporting Entrepreneurship and especially Social Entrepreneurship for achieving smart, sustainable and mainly inclusive growth, with emphasis on Innovation and Competitiveness, e.g., providing consultation, preparing Business Plans, Developing Cooperative and Clustering schemes and Entrepreneurial Incubators in fields such as Agrotourism, Cultural Heritage, Creative Industries, Home-Care for elderly, disabled people etc. "THREE THIRDS SOCIETY" has prepared, in collaboration with Panhellenic Union of Social Economy Partnerships (P.E.S.K.O.), a continuous training program called "Mentors for Social Economy", which is being implemented, in cooperation with municipalities and other public bodies.

Rezekne Academy of Technologies (RTA) is a state-founded university-type higher education institution with unlimited international accreditation. The aim of RTA is to ensure academic and professional higher education in accordance with the level of scientific development and Latvian cultural traditions, competitive in the European educational space, developing studies and research in 14 study fields. RTA implements several projects co-financed by EU programs, involving academic and general staff and students. With more than 185 cooperation partners from 31 countries, RTA promotes high mobility of academic staff and students (2nd-3rd place among all Latvian higher education institutions). The aim of the RTA Lifelong Learning Center is to promote lifelong learning, ensuring the continuation of previously acquired education and the development of education in accordance with the requirements of the labor market and the interests of clients. RTA CLL offers internships and continuing education programs to foreign partners.

Bibliography/References

1. *"https://www.youtube.com/watch?v=H-deFSyeXSM*
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