

# Module 1

*Skills and competences to facilitate the usage of e-Health*



**HEAL**  
E-HEALTH LITERACY



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# Imprint

This module was developed as part of the E-HEALth Literacy project (acronym HEAL), funded by the European Commission's Erasmus+ programme. This is a KA2 Erasmus+ Strategic Partnership with reference 2021-1-DE02-KA220-ADU-000026661. Disclaimer:

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**Date:** August 2023

Project Result Number PR2

## **Authors / Co-Authors:**

Stiftung Digitale Chancen: Dörte Stahl, Nenja Wolbers

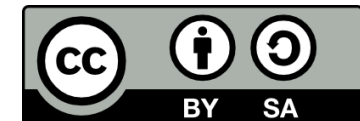
Asociacija "Viešieji interneto prieigos taškai": Monika Arlauskaitė, Laura Grinevičiūtė

IASIS NGO: Athanasios Loules, Theodora Alexopoulou, Ilias - Michael Rafail

Yinternet.org: Leonor Afonso, Thanasis Priftis

Simbioza Genesis, socialno podjetje: Brigita Dane

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# Learning Outcomes

After this training you will be able to:

1. get acquainted with the HEAL project, course and the learning goals of other four modules and be able to present the acquired knowledge to the beneficiaries
2. understand the main theories of adult learning and how to implement them in the course
3. deliver training on the core principles of adult learning and how to implement them throughout the entire course
4. understand the concept of e-health and e-health literacy and be able to present the acquired knowledge to the beneficiaries



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# Lecture 1

## Introduction

Let's get to know one another

Let's get to know HEAL project

Let's get to know the other modules



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Let's get to  
know one  
another

## **MAKE SHORT INTRODUCTION OF YOURSELF (AS A TRAINER)**

- identify yourself
- explain a little about your background and past experiences as the trainer
- explain the reason/motivation why you become a trainer of the HEAL program

## **INVITE PARTICIPANTS TO MAKE SHORT INTRODUCTION OF THEMSELVES**

- participants identify themselves
- explain their training needs and expectations
- explain the reason why they decided to attend the training



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# Let's get to know HEAL project

## INFORM PARTICIPANTS ABOUT GENERAL INFORMATION ON THE PROJECT

### HEAL project goals:

- reduce gaps in digital health literacy
- raise digital skills in the field of health literacy especially among adults and especially among vulnerable groups
- raise awareness of the importance of e-health literacy
- raise awareness of the importance of security and information literacy (media, devices, e-health services)

**Currently running in 5 countries:** Germany, Lithuania, Greece, Switzerland and Slovenia.

**Visit website:** <https://heal-digital.org/>



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Let's get to  
know other  
modules

Learning  
outcomes:  
Module 2

## DATA PRIVACY AND DIGITAL HEALTH RECORDS

1. relate datafication and data privacy to GDPR and the socioeconomic context of eHealth data
2. understand how citizens (trainees) interact with data and organize health practices
3. evaluate health data storage solutions and platforms
4. track or block the data trackers in their personal online environment (optional)



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Let's get to  
know other  
modules

Learning  
outcomes:  
Module 3

## SEARCHING AND SELECTING INFORMATION

1. get acquainted with ways how to make advanced search health-related information by using Google services & products
2. know how to distinguish safe and reliable health information on the Internet
3. know the ways how social media supports searching and selecting reliable and trustful health information online



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Let's get to  
know other  
modules

Learning  
outcomes:  
Module 4

## INTERACTION WITH AND USAGE OF SERVICES

1. be able to classify and match different types of e-health services to target groups
2. get in depth knowledge on specific apps and ability to facilitate the use to the beneficiaries
3. be able to understanding of tracking devices and sensors of mobile devices
4. be able to bring online pharmacies and e-prescriptions closer to the benefices, present usefulness and reduce fear



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Let's get to  
know other  
modules

Learning  
outcomes:  
Module 5

## COMMUNICATION AND CONNECTION WITH A HEALTH PROFESSIONAL

1. recognize the value of telecommunication technologies and services used to enhance mental and physical health at a distance
2. support the utilization of telehealth technologies
3. understand the digital needs of low digital skills adults
4. understand how to assist adults with low digital skills to integrate telemedicine practices in their everyday life



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# Activity No.1

## Me and who else is around?

### STEPS:

- Invite participants to sit comfortably in their chairs and ask them to close their eyes.
- Then ask them to take a deep breath in and a deep breath out on your count of three.
- Repeat the exercise three times together.
- After completing the exercise, ask them to open their eyes.
- Then explain that in the next one minute, they should try to concentrate and focus their minds on three things that represent something beautiful, positive, appealing to them, something that makes them happy, fulfilled etc. (it can be anything - an event, a thing, a person, etc.).



# Activity No.1

## Me and who else is around?

### STEPS:

- For each visualization and when they are in their self-feeling state they should make a deep breath in and a deep breath out.
- Ask participants to close their eyes, and start measuring the 1 minute time
- Once 1 minute has passed asked them to open their eyes and turn to the person sitting next to them (if you have a large number of participants, you may want to group more participants in each group).
- In each group, ask participants to find at least five things they have in common within 3 minutes (e.g. they all have a brother, they are all vegetarians, they all have a dog as a pet, etc.).
- After the 3 minutes have passed each group share their answers.



## Lecture 2

# A glimpse into adult learning

**MENTIMETER:** <https://www.mentimeter.com/>

What comes first on your mind when you think of the words:

**EDUCATION**

**LEARNING**

**ADULTS**



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# Types of education

Formal education

Non-formal education

Informal education



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# Formal education

## 7 CHARACTERISTICS OF FORMAL EDUCATION (Brembeck)

- **structure:** highly structured (coordinated and sequential system)
- **content:** academic, abstract
- **time:** future-time oriented
- **rewards:** tend to be deferred and are long-range
- **locale:** highly visible and fixed in
- **method:** transmission of standardized knowledge from teacher to student in the classroom place
- **participants:** teachers are formally certified , formal school student (usually age defined). Failure: social stigma
- **function:** meet the needs that people are assumed to have

Source: Brembeck, S.C . (1978), *Formal Education, Non-Formal Education and Expanded Conceptions of Development*, <file:///C:/Users/HP/Downloads/msu-0011.PDF>



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# Non-formal education

## 7 CHARACTERISTICS OF NON-FORMAL EDUCATION (Brembeck)

- **structure:** subsector rather than a system
- **content:** task or skill-centered, with objectives which relate to practical application in everyday situations
- **time:** present-time oriented
- **rewards:** payoffs are tangible and immediate
- **locale:** low visibility, may occur in almost any location
- **method:** content specific, with the instructional efforts directed at application
- **participants:** may be from all age groups, teachers have variety of qualifications (not necessarily formally certified). Failure (students): little or none social stigma
- **function:** meet the needs that people say they have

Source: Brembeck, S.C. (1978), *Formal Education, Non-Formal Education and Expanded Conceptions of Development*, <file:///C:/Users/HP/Downloads/msu-0011.PDF>



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# Informal education

## CHARACTERISTICS OF INFORMAL EDUCATION

- education that takes place every day and often on an unconscious level
- people of all backgrounds can (do) undergo informal education
- anyone (or even „anything“) can be a teacher
- spontaneous
- no structure and levels
- no guidelines, curriculums or standards
- has not the same bearing as formal education or non-formal education (*note: watching few seasons of House, m.d. does not make you a doctor!*)

Source: The different types of informal education, <https://www.througheducation.com/the-different-types-of-informal-education/>



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# Definitions

## LEARNING:

***The process of gaining knowledge and expertise (Knowles)***

Source: Knowles M.S. et. all (2015) Adult Learner: The Definitive Classic in Adult Education and Human Resource Development, <http://intrpr.info/library/books/knowles-the-adult-learner.pdf>

## ADULT/S:

***The age of majority is 18 years in all EU Member States except for Scotland, where children are considered to have full legal capacity from the age of 16 years.***

Source: Age of majority, <https://fra.europa.eu/en/publication/2017/mapping-minimum-age-requirements/age-majority>



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# Adult Learning

## Adult Education

### ADULT LEARNING

- process where adults are pursuing education
- process of adults gaining knowledge, skills, and competence
- practice of teaching and educating adults (that is unique to adults)
- also known as andragogy
- intertwined with the concept of life-long learning

Source: What is Adult Learning; <https://www.igi-global.com/dictionary/adult-learning/713>

According to EPRS\*:

**ADULT EDUCATION** refers to the entire range of formal, non-formal and informal learning activities, both general and vocational, undertaken by adults after leaving initial education and training.

\* European Parliamentary Research Service

Source, <https://www.europarl.europa.eu/thinktank/infographics/lifelonglearning/>



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# Traditional Learning Theories

**Learning theory:** a framework that describe the manner in which the information is absorbed, processed and retained during learning.

## BEHAVIOURISM

- based on observable changes in behavioural patterns
- a new behavioural pattern is being repeated until it becomes automatic
- for gaining knowledge - learner depends on an teacher
- learner is considered as *tabula rasa*

## COGNITIVISM

- change in behaviour through sequential development of an individual's cognitive abilities - the process happens inside the learner's mind
- learning is based on processing information
- teacher is the transmitter of knowledge; learner – passive reciver

Source: Teorije učenja/Theories of Learning, [https://nanopdf.com/download/slo\\_pdf](https://nanopdf.com/download/slo_pdf)



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# Learning Theories

## CONSTRUCTIVISM

- learning as a process in which the learner builds knowledge on past experiences
- the teacher is just a facilitator of learners' explorations
- learners collaborate and learn from each other
- learner is a constructor of information -integrates new information with prior knowledge
- learner forms his/her own opinion, not just memorising the "right" answers or processing the opinions of others

Source: Teorije učenja/Theories of Learning, [https://nanopdf.com/download/slo\\_pdf](https://nanopdf.com/download/slo_pdf)



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# Principal Theories of Adult Learning

## **TRANSFORMATIVE LEARNING** (*Mezirow*)

- change may occur in the way learners think about the world and themselves on what the learners learn
- challenge learners assumptions, principles and beliefs
- learners use critical thinking and questioning to evaluate their underlying beliefs
- working to change learners beliefs can be rewarding and demanding at the same time

## **SELF-DIRECTED LEARNING** (*Tough*)

- individual take initiative in the learning without the help of others
- independently plans, carries out, and evaluate learning experiences
- may happen outside/inside the classroom

Source: 10 Simple Principles of Adult Learning, <https://www.wgu.edu/blog/adult-learning-theories-principles2004.html#close>



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# Principal Theories of Adult Learning

## **EXPERIENTIAL LEARNING** (*Kolb*)

- based on idea that adults are shaped by their experiences
- learning style: hands on experiences, practical, reflective /instead just hearing, reading and memorizing about the topic

## **PROJECT-BASED LEARNING/PROBLEM-BASED LEARNING** (*Dewey*)

- “learning by doing” method of education
- similar to experiential learning
- utilizes real-world scenarios and creates projects
- the outcomes aren’t proven (it is not as effective as other learning methods)

*Source: 10 Simple Principles of Adult Learning:*

<https://www.wgu.edu/blog/adult-learning-theories-principles2004.html#close>



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# Andragogy

## ANDRAGOGY (Knowles)

- art and science of helping adults learn
- main assumption: adults learn differently from children

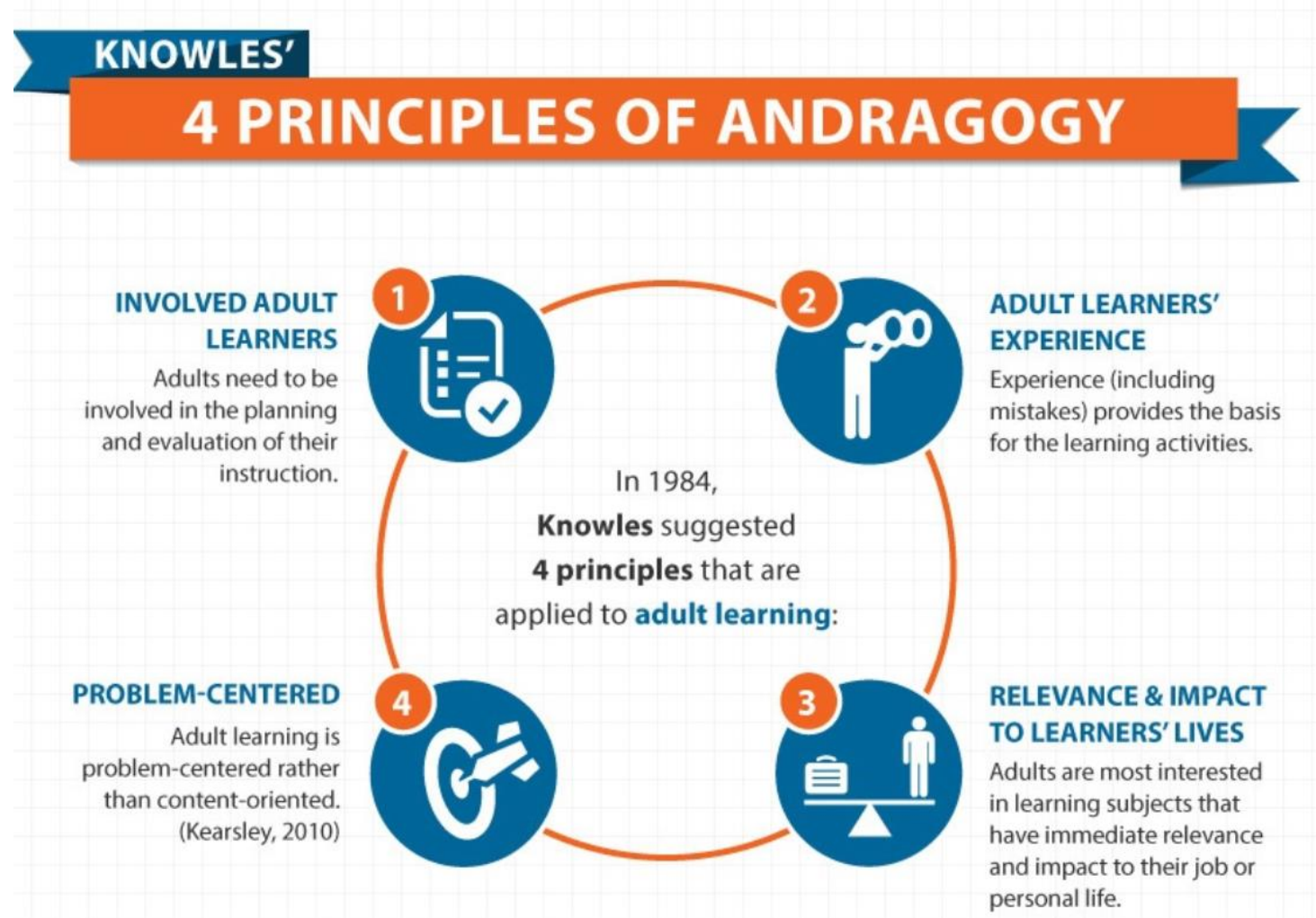
Source: 10 Simple Principles of Adult Learning: <https://www.wgu.edu/blog/adult-learning-theories-principles2004.html#close>



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# Andragogy

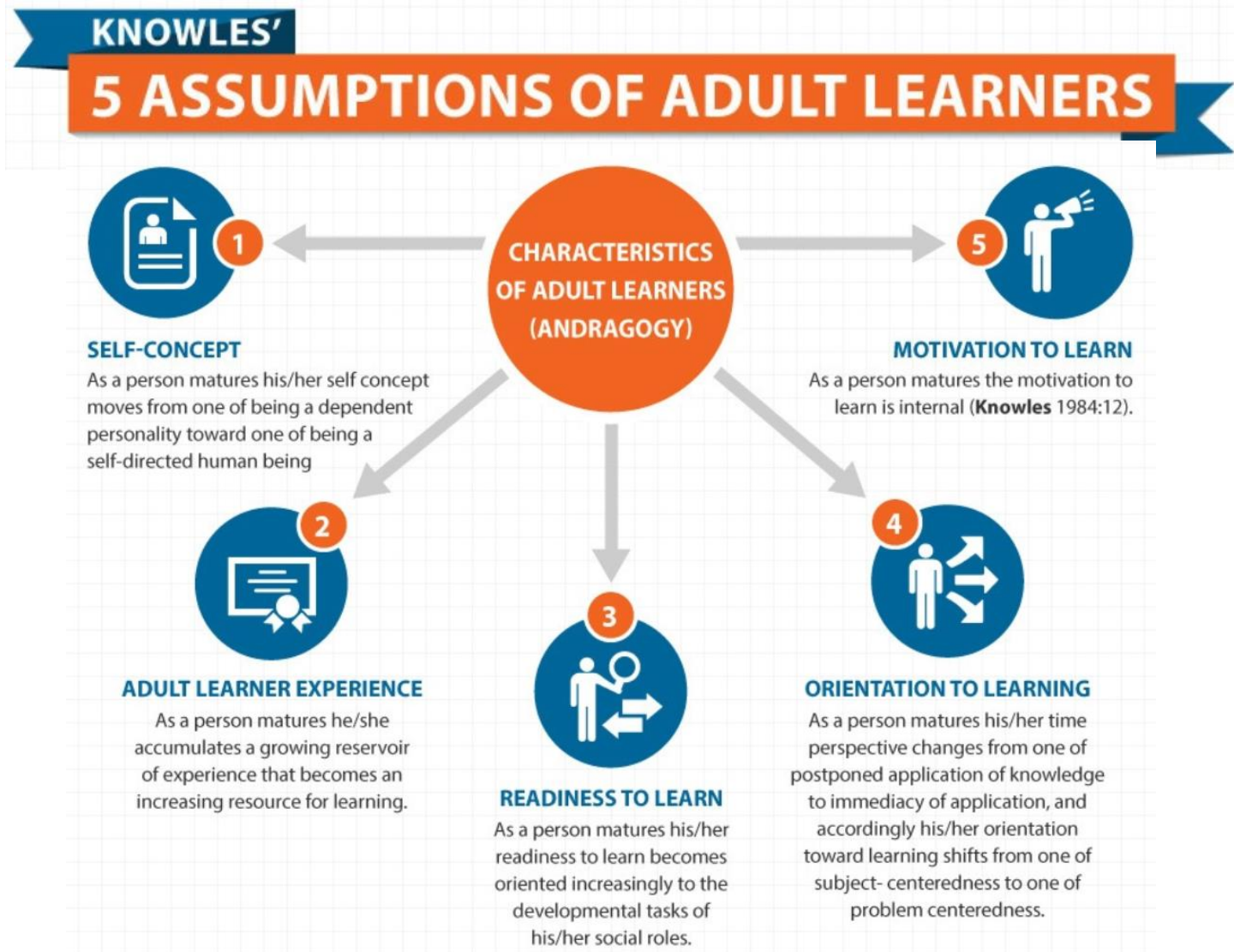


Source: *The Adult Learning Theory - Andragogy –Infographic*,  
<https://elearninginfographics.com/adult-learning-theory-andragogy-infographic/>



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# Andragogy



Source: *The Adult Learning Theory – Andragogy - Infographic*,  
<https://elearninginfographics.com/adult-learning-theory-andragogy-infographic/>



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# Characteristics of adult learners

- need to know why they should learn something
- need internal motivation
- want to know how learning will help them specifically
- bring prior knowledge and experience that form a foundation for their learning
- self-directed and want to take charge of their learning journey
- find the most relevance from task-oriented learning that aligns with their own realities
- less flexible thinking

*Source and further reading: 10 Simple Principles of Adult Learning,  
<https://www.wgu.edu/blog/adult-learning-theories-principles2004.html#close>*



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# Adults Learning Styles

**VISUAL LEARNERS:** learn more effectively if information is visually presented

- use videos, pictures, diagrams etc – also other learners will benefit
- write key points - this provides visual cues
- avoid using large text
- substitute words for colours and pictures and
- use exercises where learners create mind maps
- storytelling
- colour-code and organise learning materials
- prefer to learn alone in quiet environments

Source: Adult Learning Styles: Helping Adults Learn with the VAK Model, <https://virtualspeech.com/blog/adult-learning-styles-vak-model>

## **Application in online environment:**

The online environment is well suited for this type of learners – because of the graphical presentation

Source: Adult Learning Principles, <http://pictet-tempus.sstu.ru/doc/o3o2/Module%2o2%2o-%2oAdult%2oLearning%2oPrinciples.pdf>



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# Adults Learning Styles

**AUDITORY LEARNERS:** learning with sound (music, recordings, rhymes, rhythm etc.)

- they remember conversations – use discussion
- if reading is required - use audio books
- let them listen to music as they go over learning material
- allow recordings of your lessons or make you lessons accessible online - also helpful for other learning types
- get students to pair up and explain concepts to each other
- encourage problem-solving aloud
- use mnemonic devices (*acronyms and acrostics, association, chunking, etc.,*)
- if you are explaining a story, play relevant sounds from your computer
- space – traditional classroom suits them best

Source Adult Learning Styles: Helping Adults Learn with the VAK Model, <https://virtualspeech.com/blog/adult-learning-styles-vak-model>



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# Adults Learning Styles

## Application in online environment

- can complement these learners' style (regardless that most information in online environment are presented visually)
- encourage group participation and collaborative activities (breakout rooms etc.)
- stream audio or video material

Source: Adult Learning Principles, <http://pictet-tempus.sstu.ru/doc/0302/Module%202%20-%20Adult%20Learning%20Principles.pdf>



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# Adults Learning Styles

**KINAESTHETIC LEARNERS:** are using their bodies during the learning process

- physical exercise and hand-on experiences
- activities where they use pen and paper (writing is a physical exercise) – diagrams, graphs, maps
- interact with physical objects
- role-playing, real life examples (case studies)
- review their learning notes during the physical activity
- teach other class members some of the lesson content.
- in case you use visualization – explain the feelings that would be felt
- venue – large space

Source: Adult Learning Styles: Helping Adults Learn with the VAK Model, <https://virtualspeech.com/blog/adult-learning-styles-vak-model>



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# Adults Learning Styles

## Application in online environment

- online environment can provide learning opportunities also for this type of learners
- simulations with 3-dimensional graphics ( as replica for physical demonstrations)
- mixed courses - part of the sessions can be conducted in physical environment and then discussed online
- include also fieldwork - organize online discussion before and after the experience

Source: Adult Learning Principles, <http://pictet-tempus.sstu.ru/doc/0302/Module%202%20-%20Adult%20Learning%20Principles.pdf>



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# Knowles 5 adult theory assumptions and e-learning

1. **SELF-CONCEPT:** create learning experiences that offer minimum instruction and maximum autonomy
  - offer support system - guidance and help
  - present them with tools and resources - encouraged to explore a topic on their own
  - let them work autonomously
  - use self-study or group collaboration projects that involve minimal teacher intervention

Source: 9 Tips To Apply Adult Learning Theory to eLearning, <https://elearningindustry.com/9-tips-apply-adult-learning-theory-to-elearning>



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# Knowles 5 adult theory assumptions and e-learning

## 2. ADULT LEARNER EXPERIENCE: include a wide range of instructional design models and theories to appeal to varied experience levels and backgrounds

- note: adult learning audience is going to be more diverse (different backgrounds, experience levels, skill sets etc.)
- survey your audience before the course (technical knowledge, limitations, education levels etc.)
- create eLearning experiences that informative and engaging/not too challenging or boring

Source: 9 Tips To Apply Adult Learning Theory to eLearning, <https://elearningindustry.com/9-tips-apply-adult-learning-theory-to-elearning>



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# Knowles 5 adult theory assumptions and e-learning

## **3. READINESS TO LEARN: utilize social media and online collaboration tools to tie learning to social development**

- adults getting older tend to gravitate more toward learning experiences that offer social development benefits (skills that pertain to our social roles)

## **4. ORIENTATION TO LEARNING: emphasize how the subject matter is going to solve problems that an adult learner regularly encounters**

- adult learners, need to know the why they to be engage in the eLearning process (not only to acquire specific information, but want to know where this information can be applied in the immediate (in the here-and-now, rather than the future)
- offer real world examples and scenarios

Source: 9 Tips To Apply Adult Learning Theory to eLearning, <https://elearningindustry.com/9-tips-apply-adult-learning-theory-to-elearning>



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# Knowles 5 adult theory assumptions and e-learning

## 5. MOTIVATION TO LEARN: there must be a valid reason behind every e-Learning course, module or educational activity

- motivation is key with adult learners
- offer them a reason for every eLearning activity, assessment, or eLearning module they'll need to complete

Source: 9 Tips To Apply Adult Learning Theory to eLearning, <https://elearningindustry.com/9-tips-apply-adult-learning-theory-to-elearning>



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# Obstacles in adult learning

- lack of time (have jobs, children etc.)
- self-doubt (too old to learn)
- neuroplasticity of our brain (biological process – our brain become less plastic -harder time to understand new things)
- financial barriers
- contradiction (as the result of the clash between what hey have learned before and the new gained knowledge)

Source: 10 Simple Principles of Adult Learning, <https://www.wgu.edu/blog/adult-learning-theories-principles2004.html#close>



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# Motivation

- create useful and relevant learning experiences based on the age group and interests of your learners
- facilitate exploration (all sorts of materials, references, infographics, videos, lectures, podcasts etc.): Note: voice in video is not enough - importance of personal touch – invite some experts, authors, professors and other specialists
- use humour
- chunk information
- stimulate your learners (brain teasers, ask provocative questions)
- make it visually-compelling
- be respectful
- ask for feedback

Source: *17 Tips To Motivate Adult Learners*, <https://elearningindustry.com/17-tips-to-motivate-adult-learners>



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# Activity No 2

## Group discussion

### STEPS:

After the first lecture, show the results of the Mentimeter again (participants thoughts and associations on the words *education, learning, adults*) and invite participants to comment.

First use some questions that can be answered with a simple yes or no than, in order to advance the discussion, slowly introduce the questions, that can be answered only with opinion.

Make sure that all participants of the group have a chance to speak and express their thoughts so that the discussion is not dominated by any one person.

Clarify and summarize important points, arguments, or ideas.



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# Lecture 3

## Introduction to e-Health

**MENTIMETER:** <https://www.mentimeter.com/>

What comes first on your mind when you think of the word:

**E-HEALTH**



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# e-Health or Digital Health

- the concept emerged to designate the use of information communication technology (ICT) in the healthcare sector
- a field in the intersection of medical informatics, public health and business
- refers to health services and information delivered or enhanced through the Internet and related technologies
- the term characterizes not only a technical development, but also a state-of-mind, a way of thinking, an attitude, and a commitment for networked, global thinking, to improve health care locally, regionally, and worldwide by using ICT

Source: Eysenbach G. (2001), What is e-health, <https://www.jmir.org/2001/2/e20>



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# The 10 E's in e-Health

1. **Efficiency in health care** - decreasing costs
2. **Enhancing quality of health care** - comparisons between different providers, directing patient to the best quality providers etc.
3. **Evidence based** - e-health interventions should be evidence-based
4. **Empowerment of consumers and patients**
5. **Encouragement of a new relationship between the patient and health professional**- partnership, where decisions are made in a shared manner
6. **Education of physicians through online sources** (continuing medical education) **and consumers** (health education, preventive information for consumers)



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# The 10 E's in e-Health

7. **Enabling information exchange and communication** in a standardized way between health care establishments
8. **Extending the scope of health care beyond its conventional boundaries**
  - e-health enables consumers to easily obtain health services online from global providers
9. **Ethics** - e-health involves new forms of patient-physician interaction and poses new challenges and threats to ethical issues such as online professional practice, informed consent, privacy and equity issues
10. **Equity** - threat that e-health may deepen the gap between the "haves" and "have-nots"

Source: Eysenbach G. (2001), What is e-health, <https://www.jmir.org/2001/2/e20>



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# e-Health

## E-HEALTH SHOULD ALSO BE:

- **easy-to-use**
- **entertaining** (no-one will use something that is boring!)
- **exciting, trustworthy, and realible**
- and it should definitely **exist**

Source: Eysenbach G. (2001), What is e-health, <https://www.jmir.org/2001/2/e20>



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Source: <https://www.youtube.com/watch?v=CZ2xv-GabHg>

# Areas and services of e- Health

Telemedicine

Mobile Health

Wearables and Serious games

Electronic Health Records



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# Telemedicine

- provision of remote clinical services via real-time /providing care at a distance
- two-way communication between the patient and the healthcare provider using electronic audio and visual means
- it s practiced from a hub, which is the site from where the distant practitioner delivers service through a telecommunications system
- requires no significant costs other than a web camera and a secure patient portal that connects the doctor to a secured electronic medical record database
- expanded access to medical diagnosis and treatment (improving accessibility to patients, especially the ones in areas with limited local health professionals, providing second opinions more easily and faster etc. )
- saves time, money and travel for both doctors and patients
- reduces waiting times

Source: What is Telemedicine?, <https://www.news-medical.net/health/What-is-Telemedicine.aspx>



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# Types of Telemedicine

- **remote monitoring:** range of technological devices monitor the health and clinical signs of a patient remotely
- **store-and-forward:** patient information (medical images ,biosignals) can be sent to the specialist, when it has been acquired from the patient
- **real-time interactive services:** provide immediate advice to patients who require medical attention
- **telenursing, teleneuropsychology, telepharmacy ,telerehabilitation ...**

Source: Types of Telemedicine, <https://www.news-medical.net/health/Types-of-Telemedicine.aspx>



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# Mobile Health

## Types of apps

- refers to healthcare applications
- helps collect and monitor clinical data and data collected in real-time of the patients by the healthcare providers
- **remote monitoring apps**  
help the practitioners to take care of the patients and track their condition, remotely (blood glucose levels, oxygen level, heart rate, blood pressure, etc.)
- **clinical and diagnostic apps**  
let the practitioners to view lab results, check electronic health records, perform digital imaging  
patients can get to schedule their appointments via app

Source: mHealth apps: Types and Examples, <https://siliconithub.com/mhealth-apps-types-and-examples/>



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# Mobile health

## Types of apps

- **healthy living apps**  
check in the metrics like heart rate, diet, exercise, and sleep
- **clinical reference apps**  
created for looking for references and guides in one place
- **productivity apps**  
increase efficiency within the healthcare providers (mobile charting, home healthcare scheduling, internal business communication, remote dictation)

Source: mHealth apps: Types and Examples, <https://siliconithub.com/mhealth-apps-types-and-examples/>



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# Wearables and Serious Games

- **smart clothing** and **accessories** such as wristbands, glasses and watches to monitor and collect information on our health and physical condition
- **special video games** are used as a learning resource for healthcare professionals and students to enhance their training about specific pathologies

Source: *eHealth, when technology becomes the key to social well-being*,  
<https://www.iberdrola.com/innovation/ehealth>



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# Electronic Health Records

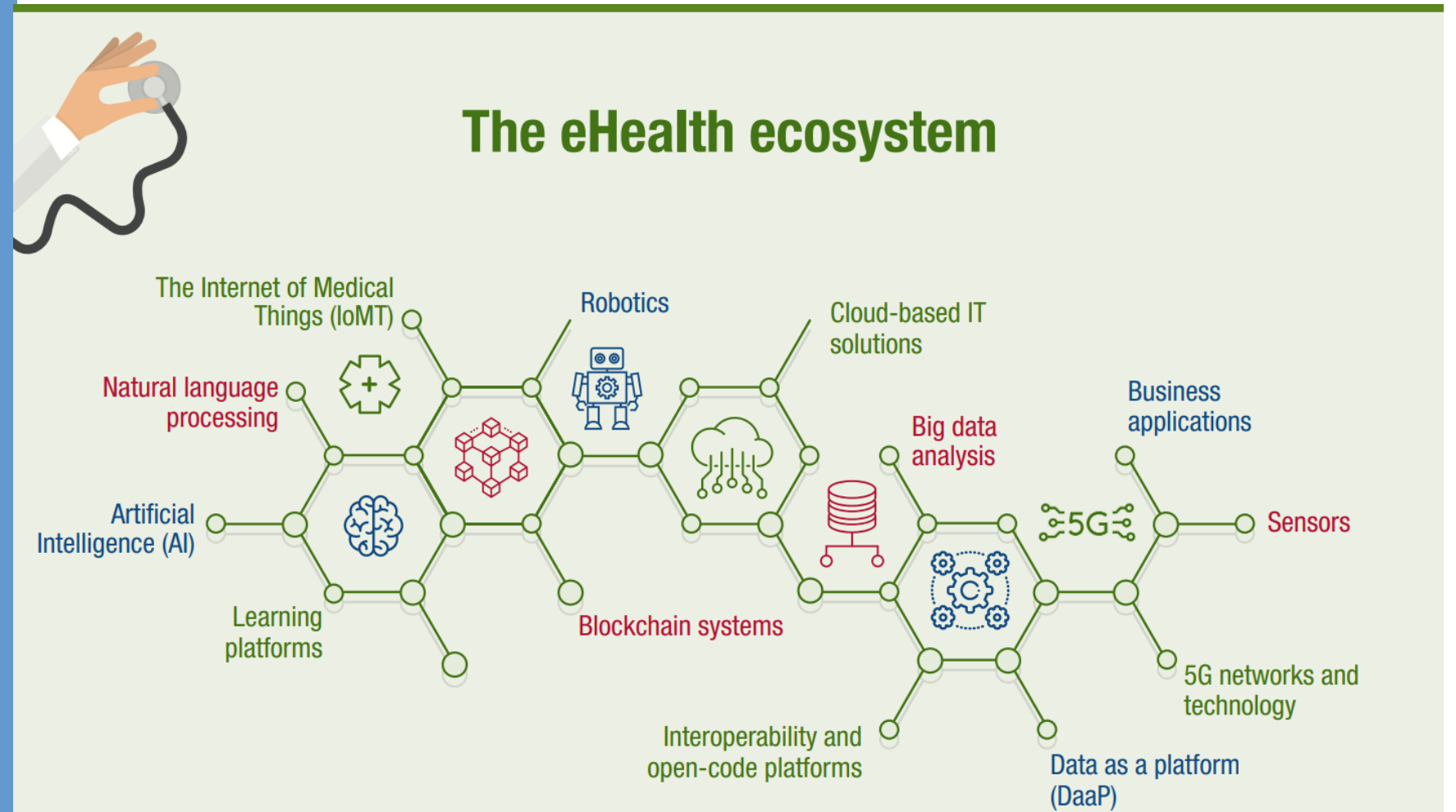
- a digital version of a patient's paper chart (patient's medical history, diagnoses, medications, treatment plan etc.)
- real-time, patient-centered records that make information available instantly and securely to authorized users
- offer access to evidence-based tools that providers can use in making decisions about a patient's care
- automate and streamline providers' workflow
- increase organization and accuracy of patient information

Source: What Are Electronic Health Records (EHRs)?, <https://www.healthit.gov/topic/health-it-and-health-information-exchange-basics/what-are-electronic-health-records-ehrs>



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## Other Areas of e-Health



Source:

[https://www.iberdrola.com/documents/20125/40261/Infographic\\_Ehealth\\_Ecosystem.pdf/ef1968bc-94c4-4a79-330a-da537c5a6968?t=1627032604639](https://www.iberdrola.com/documents/20125/40261/Infographic_Ehealth_Ecosystem.pdf/ef1968bc-94c4-4a79-330a-da537c5a6968?t=1627032604639)



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# Technologies used in e- Health

## **Internet of Things (IoT)**

- the connection between the physical and digital world
- crucial in equipment such as inhalers and audiometers.

## **Big Data**

- using big data to perform macro data analysis allows for tailored treatments
- helps to detect the risk factors and potential side effects of drugs

## **Artificial Intelligence (AI)**

- helps healthcare professionals make wiser decisions and deliver better treatments

## **Virtual reality (VR)**

- assists with patient rehabilitation and treating psychological disorders

Source:: What Are Electronic Health Records (EHRs)?, <https://www.iberdrola.com/innovation/ehealth>



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# Technologies used in e- Health

## Blockchain

- enables safe access to a patient's health record and more efficient administration
- allows pharmaceutical labs to keep a more precise record in the drug production process

## 3D and 4D printing

- production of medical items using 3D printers
- the use of 4D printing in ultrasound scans

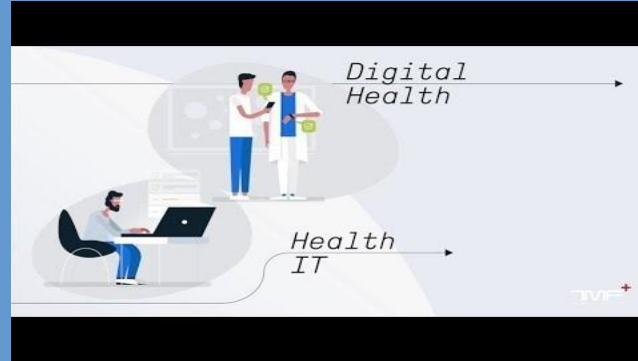
## Chatbots

- provide a tool to enable faster communication – computer programs using n (AI) and natural language processing (NLP) to understand patients questions

*Source: eHealth, when technology becomes the key to social well-being,*  
<https://www.iberdrola.com/innovation/ehealth>



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Source: <https://www.youtube.com/watch?v=b59sGPXSNyk>



# Advantages of e-Health

- accessibility
- tailored interventions to the users
- user empowerment
- cost-effectiveness, possibility of reduce costs
- anonymity and confidentiality of users
- better health care behaviours. better health outcome
- supplements physician's information
- community support
- user fidelity
- e-health interventions are usually more attractive for users
- more safety of patients/less medical errors

Source: Nieves Soriano et al (2019) Health: advantages, disadvantages and guiding principles for the future, [https://www.researchgate.net/publication/334409444\\_eHealth\\_advantages\\_disadvantages\\_and\\_guiding\\_principles\\_for\\_the\\_future\\_Preprint](https://www.researchgate.net/publication/334409444_eHealth_advantages_disadvantages_and_guiding_principles_for_the_future_Preprint)



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# Disadvantages of e-Health

- concerns about the quality of available health information (especially on internet)
- not easily understandable information and difficulty to evaluate if information is adequate for the user
- difficulties to access electronic health information due to digital divide
- risk of unexpected adverse effects
- concerns about privacy and security
- stress or anxiety, when performing health searches
- generating distrust
- ethical and legal concern
- risk of unfavourable provider acceptance

*Source: Nieves Soriano et al (2019) Health: advantages, disadvantages and guiding principles for the future, [https://www.researchgate.net/publication/334409444\\_eHealth\\_advantages\\_disadvantages\\_and\\_guiding\\_principles\\_for\\_the\\_future\\_Preprint](https://www.researchgate.net/publication/334409444_eHealth_advantages_disadvantages_and_guiding_principles_for_the_future_Preprint)*



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# Guiding principles for the future of e-Health

- improve user's health and e-health literacy
- health care providers education and implication in e-health development and delivery
- study and improve the usability of ehealth interventions
- examine e-health effectiveness and health outcomes
- search ways of minimising the digital divide
- investigate evaluation methods to ensure e-health quality
- tailoring e-health interventions to user's need
- investigate about costs, effectivity and sustainability
- develop ethical aspects

Source: Nieves Soriano et al (2019) Health: advantages, disadvantages and guiding principles for the future, [https://www.researchgate.net/publication/334409444\\_eHealth\\_advantages\\_disadvantages\\_and\\_guiding\\_principles\\_for\\_the\\_future\\_Preprint](https://www.researchgate.net/publication/334409444_eHealth_advantages_disadvantages_and_guiding_principles_for_the_future_Preprint)



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# Health Literacy

- find providers or healthcare facilities
- complete complex health questionnaires
- understand the forms they are being asked to sign
- explain medical history to the provider
- understand terms used by health providers
- understand how risky behaviors impact health
- comply directions on prescription medicines
- schedule follow-up care or visits etc ...

Source: *6 Health Literacy Challenges in Healthcare*, <https://clarityssi.com/health-literacy-challenges>



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# e-Health Literacy

***the ability to seek, find, understand, and appraise health information from electronic sources and apply the knowledge gained to addressing or solving a health problem***

Source: eHealth Literacy: Essential Skills for Consumer Health in a Networked World,  
<https://doi.org/10.2196/jmir.8.2.e9>



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# Activity No 3

## Group discussion

### STEPS:

- After the first lecture, show the results of the Mentimeter again (participants thoughts and associations on the word *e-health*) and invite participants to comment.
- Firstly use some questions that can be answered with a simple yes or no than, in order to advance the discussion, slowly introduce the questions, that can be answered only with opinion.
- Make sure that all participants of the group have a chance to speak and express their thoughts so that the discussion is not dominated by any one person.
- Clarify and summarize important points, arguments, or ideas.



# Homework

Choose one of the following adults learning styles:

1. visual learner
2. auditory learner
3. kinaesthetic learner

Prepare a short draft of the learning material, adapted to the characteristics of the chosen style, for a duration of 5 minutes.

You can choose any topic as the content of the learning material, but ideally one related to e-Health.



# Further Reading

- 10 Definitions on Learning,  
<https://thelearningcoach.com/learning/10-definitions-learning/>
- Maria Herzog, (2020) How to define the adult in 2020?,  
International Journal of Business and Social Science Research, Vol:  
1, Issue:, November/2020, <https://ijbssrnet.com/index.php/ijbssr>
- Types and examples of mnemonic devices,  
<https://psychcentral.com/lib/memory-and-mnemonic-devices#what-they-are>

