GIVINGCARE
Empowering Caregivers

A2.2 – Educative resources for teachers

ICT applied to caregiving

<< Lesson Materials>>

Module: 4

Sub-Module: 4.5

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Introduction

Information and Communication Technologies (ICT) are **increasingly present in people's daily lives**, offering a wide range of possibilities for different occupations, such as leisure, social participation, education or work.

ICT can facilitate many activities for caregivers, and contribute to the improvement of both their quality of life and that of the cared-for person.

This submodule is focused on the **benefits and possibilities that ICT can provide in different care-related tasks**. In addition, it also addresses the contributions that technology can make to other needs of caregivers, related to their personal sphere, such as their leisure and free time, their social relationships, or their training.

Outcomes

1. To describe what ICT are, how they are classified, and what general benefits they can bring to caregivers.
2. To identify the main ICT that can be used in tasks related to caregiving.
3. To be able to integrate the use of ICT into daily care routines.
4. To recognize the main ICT that can be used in leisure, social participation, and education activities.
5. To define the main risks that may arise when using ICT.
6. To know how to use ICT safely and without risks.

Contents

1. ICT: Definition, conceptualization and classification. General benefits for caregivers.
2. Key ICT to support caregiving.
3. Main ICT for leisure, social participation, and education.
4. Guidelines for safe and risk-free use of ICT. Ethical considerations in the application of ICT in caregiving. Ethical considerations in the use of ICT in the personal domain of caregivers (leisure, social participation, and education). Keys to staying safe in the use of ICT, and avoiding risks.

Introduction

Module	4. MANAGEMENT IN CAREGIVING
Sub-module	4.5. ICT applied to caregiving
Lesson nr.	#1
Duration (minutes)	30
Date	

ICT: Definition, conceptualization and classification

What are ICT?

"Diverse set of technological tools and resources used to transmit, store, create, share or exchange information." UNESCO Institute for Statistics, 2009

"Technologies that provide access to information through telecommunications." https://techterms.com/definition/ict

"The convergence of several technologies, and the use of common transmission lines carrying very diverse data and communication types and formats. (…) In a very simplified sense, ICT is used to talk about all of the technologies that facilitate communications." Techopedia, 2020

ICT: Definition, conceptualization and classification

These technological tools and resources include: UNESCO Institute for Statistics, 2009

Computers

- Desktop
- Laptop

The Internet

- Websites
- Blogs
- Emails

Live broadcasting technologies

- Radio
- Television
- Webcasting

Recorded broadcasting technologies

- Podcasting
- Audio and video players
- Storage devices

Telephony

- Fixed or mobile
- Satellite
- Visio/video-conference, etc.

Icons extracted from: https://www.flaticon.com/authors/vectorsmarket15, https://www.freepik.com, https://www.flaticon.com/authors/wanicon, https://flat-icons.com

ICT: Definition, conceptualization and classification

ICT can ben classified into:

Networks	Terminals	Services
• Broadband • Fixed and mobile telephony • Radio • Satellites • Television	• Audio and video portable players • Computers (desktop or laptop) • Game consoles • Internet browser • Operating system • Phones and smartphones • Software • Television	• Audio and music • E-commerce • E-health • E-learning • E-mail • GPS • Instant messaging • Mobiles services • Online banking • Radio • Search for information • Social networks and blogs • Television and cinema • Video games

General benefits for caregivers

What benefits can the use of ICT offer…?

- Improvement of the quality of life, wellbeing, self-esteem, perceptions of self-efficacy and security, and empowerment of both carers and care recipients.
- Access to more qualified care, and improvement of care skills.
- Facilitation of care at home, and participation in aspects of life outside the home.
- Increased contact and liaison with others and with social and health care teams.
- Time and money savings contributing to the sustainability of care systems.

Barabella et al, 2011; Buis, 2008; Carretero et al, 2015; Lam & Lam, 2012; Pot et al, 2012; Shaw et al, 2004; Smith & Toseland, 2006; The Princess Royal Trust for Carers, 2012; Torp et al, 2008; Weiner et al, 2005; Wu et al, 2009

General benefits for caregivers

Available ICT to address carers' needs include:

a) technologies for **independent living**, that allow people to stay at home without continual care support, relieving pressure on carers.

b) tools that give remote access to training, **information and learning** about caring-related issues, such as websites and online training materials.

c) **personal support and social integration** that provide social, emotional and peer support, social networking systems for peer support and volunteer call networks (mobile, internet).

d) online tools for **care coordination** (coordinating care tasks from formal sector and informal and family employed carers, respite, and information sharing).

Carretero et al, 2012; Carretero et al, 2015; Eurocarers, 2016; Kluzer et al, 2010

Table extracted from: **Carretero et al, 2015**

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From: Information and communication technologies for informal carers and paid assistants: benefits from micro-, meso-, and macro-levels

Impact analysis (micro-level)			**Impact analysis (meso-macro-level)**	
Services	**Impacts for informal carers**	**Impacts for older people**	**Social Services**	**Health Care**
Independent living	(−) hours of care (−) eliminates the need for constant presence (+) peace of mind (−) anxiety (+) health-related quality of life (+) reconciliation of care and work and family	(+) independent living and delay dependency (+) health status (+) perception of safety (+) compliance in treatment (+) improved relation carer–older person	(−) number of care visits (−) overnight care stays Delays institutional care	(−) hospital admissions
Information & learning	(+) accessibility to training (+) finding and receiving appropriate information (+) caring skills and digital competence (+) employability (+) sense of security	(+) Quality of care	Delays institutional care (−) number of care visits (−) overnight care stays (+) quality and effectiveness of formal care	(−) hospital admissions (−) length of hospital stays
Personal support & social integration	(+) promotes development of informal social networks of carers (−) isolation (−) stress (+) Quality of life (+) reconciliation of care and work	(+) Quality of care (+) Quality of life (+) Improved relation carer–older person		
Care coordination	(−) stress (+) Quality of life (−) burden of care (+) reconciliation of care and work (+) builds trust with professionals	(+) Quality of care (+) Quality of life (+) health status	(−) number of care visits Delays institutional care	
			Savings of 79 m GBP (over 5 years), for 20 m GBP investment	

(−) means a decrease in the value of the variable, (+) means increase in the value of the variable. For example, (−) stress in the column of informal carers and paid assistants means that they informed of a decrease in stress due to the use of the ICT-based service. (+) quality in the column of older people means that they informed of a higher level of quality of life due to the use of the ICT-based service

General benefits for caregivers

- ICT as a pathway to information and skills development
- ICT as an instrument to foster peer-support and counter isolation
- ICT as an instrument for care coordination
- ICT as an instrument for care coordination
- ICT as a tool to enable and support independent living
- ICT based solutions to support work-life balance
- ICT as a tool to enable and support independent living

Most ICT-based solutions are proving very useful to address the needs and improve the quality of life of both informal carers and the persons they care for.

EUROCARERS

Eurocarers, 2020 (https://eurocarers.org/publications/information-communication-technology-ict-for-informal-carers/)

General benefits for caregivers

EURO CARERS

Online directory of ICT-based services for informal carers

https://carict.eu/

Introduction

Module	4. MANAGEMENT IN CAREGIVING
Sub-module	4.5. ICT applied to caregiving
Lesson nr.	#2
Duration (minutes)	120
Date	

Key ICT to support caregiving

1. Websites and apps with tips and recommendations on how to perform certain care tasks, or how to look after their own health.
2. Videos with guidelines on care tasks.
3. Programmes for the planning and recording of care related activities, appointments and medication administration.
4. Platforms or applications to meet other caregivers and exchange experiences and knowledge.
5. Self-assessment procedures for caregiving burden, to periodically self-assess whether the caregiver is in a situation of overload and recognises the need for help and support.

The following are examples of technologies that exist today, but as technology changes rapidly, these examples may not be available in the future.

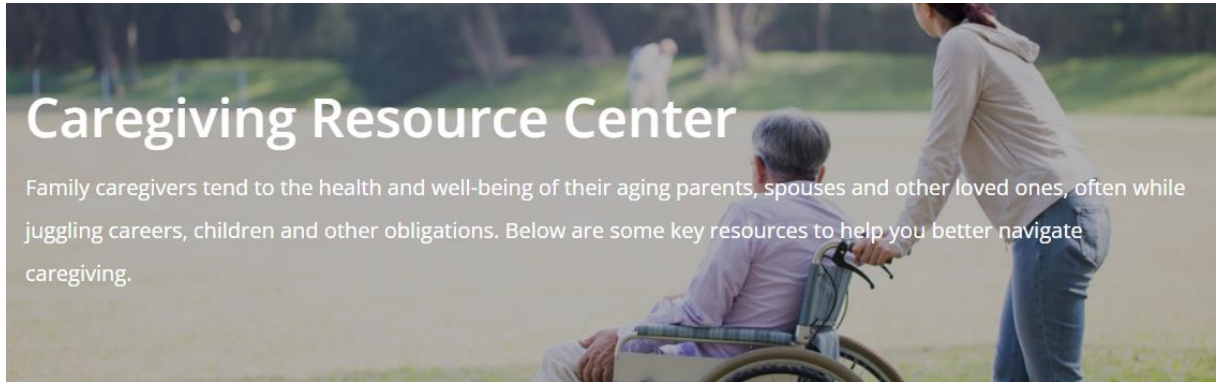
Key ICT to support caregiving

1. Websites and apps with tips and recommendations on how to perform certain care tasks, or how to look after their own health.
2. Videos with guidelines on care tasks.

Caring.com

https://www.caring.com/caregivers/

https://www.caring.com/caregivers/burnout/



Key ICT to support caregiving

1. Websites and apps with tips and recommendations on how to perform certain care tasks, or how to look after their own health.
2. Videos with guidelines on care tasks.

https://www.caregiver.org/caregiver-resources/

10 TIPS FOR FAMILY CAREGIVERS

Seek support from other caregivers. You are not alone!

Take care of your own health so that you can be strong enough to take care of your loved one.

Accept offers of help and suggest specific things people can do to help you.

Learn how to communicate effectively with doctors.

1 2 3 4

Be open to new technologies that can help you care for your loved one.

Watch out for signs of depression and don't delay getting professional help when you need it.

Caregiving is hard work so take respite breaks often.

7 6 5

Organize medical information so it's up to date and easy to find.

Make sure legal documents are in order.

Give yourself credit for doing the best you can in one of the toughest jobs there is!

8 9 10

CAREGIVER ACTION NETWORK CAN

CaregiverAction.org

Top 10 Tips for Caregivers

Family Caregiver Toolbox

Caregiver Videos

CAREGIVER ACTION NETWORK CAN

GIVINGCARE Empowering Caregivers

https://www.caregiveraction.org/

Caregiver Video Resource Center

Find comfort in knowing that you are not alone by listening to the experiences of your fellow caregivers.

Video Topics

Schizophrenia

Caregivers, mental health professionals, and leading advocates discuss the importance of early diagnosis and intervention.

WATCH VIDEO

Alzheimer's Disease

Caregivers talk about their discoveries, share care hints and help you feel less alone.

WATCH VIDEOS

Huntington's Disease

Family members share their experiences dealing with Huntington's Disease.

WATCH VIDEOS

Parkinson's Disease

Caregivers describe their journey through Parkinson's Disease.

WATCH VIDEOS

COPD

Listen as a caregiver describes taking on new responsibilities as her husband ages with COPD.

WATCH VIDEOS

Hands-On Care

Learn how to best care for your loved one at home.

WATCH VIDEOS

Key ICT to support caregiving

1. Websites and apps with tips and recommendations on how to perform certain care tasks, or how to look after their own health.
2. Videos with guidelines on care tasks.

Next Step in Care
Family Caregivers & Health Care Professionals Working Together

https://www.nextstepincare.org/Videos/

https://www.nextstepincare.org/Caregiver_Home/

mmLearn.org

https://training.mmlearn.org/caregiver-training-videos

National Caregivers Library

http://www.caregiverslibrary.org/

Key ICT to support caregiving

3. Programmes for the planning and recording of care related activities, appointments and medication administration.

Organiser of appointments, activities and lists (e.g. shopping or to-do lists). Examples:

COZI Family Organizer

https://www.cozi.com/

Video link

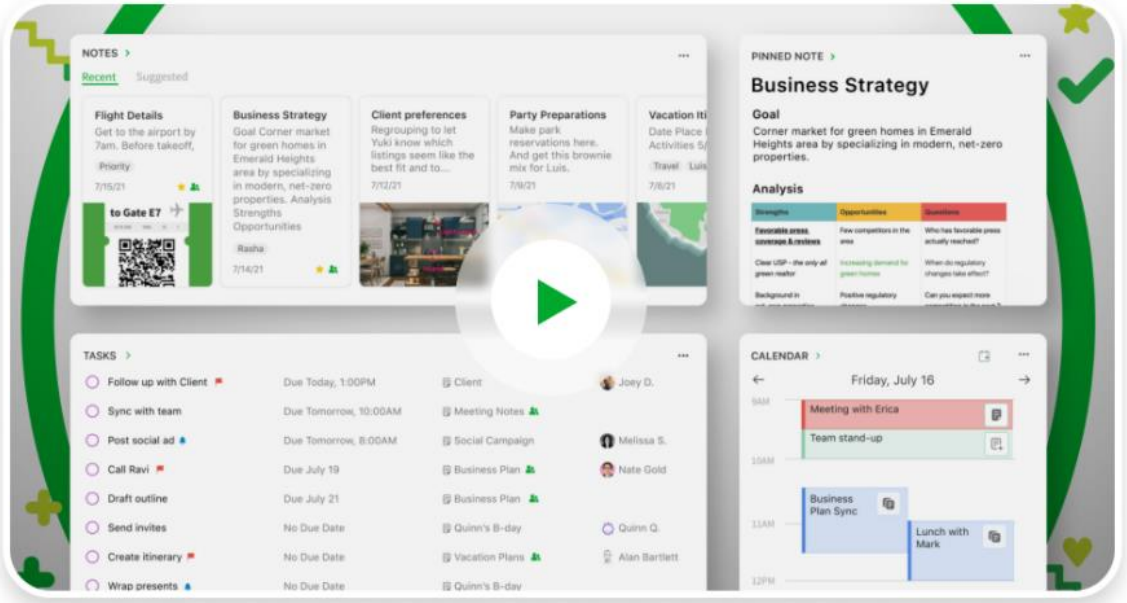
Key ICT to support caregiving

3. Programmes for the planning and recording of care related activities, appointments and medication administration.

Organiser of appointments, activities and lists (e.g. shopping or to-do lists). Examples:

Evernote

https://evernote.com/



Video link

Key ICT to support caregiving

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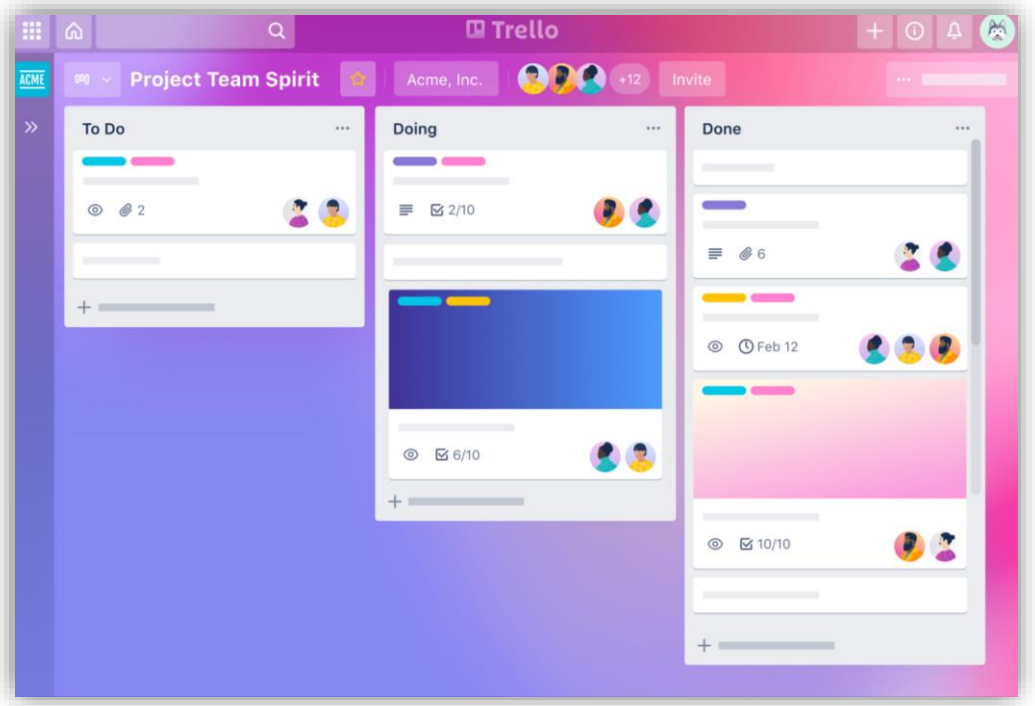


Trello

https://trello.com/

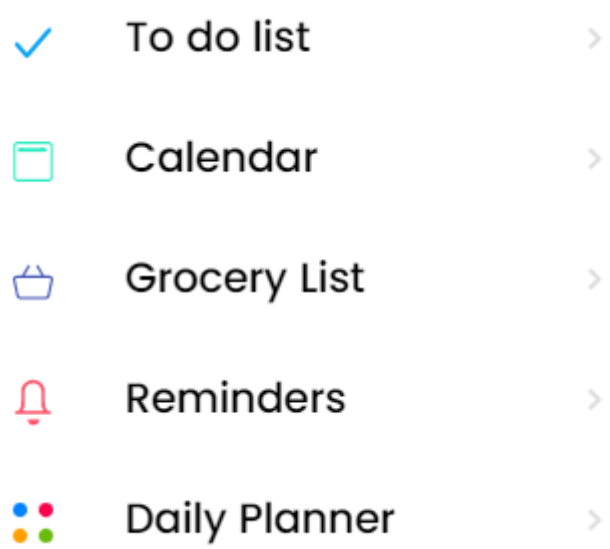
Key ICT to support caregiving

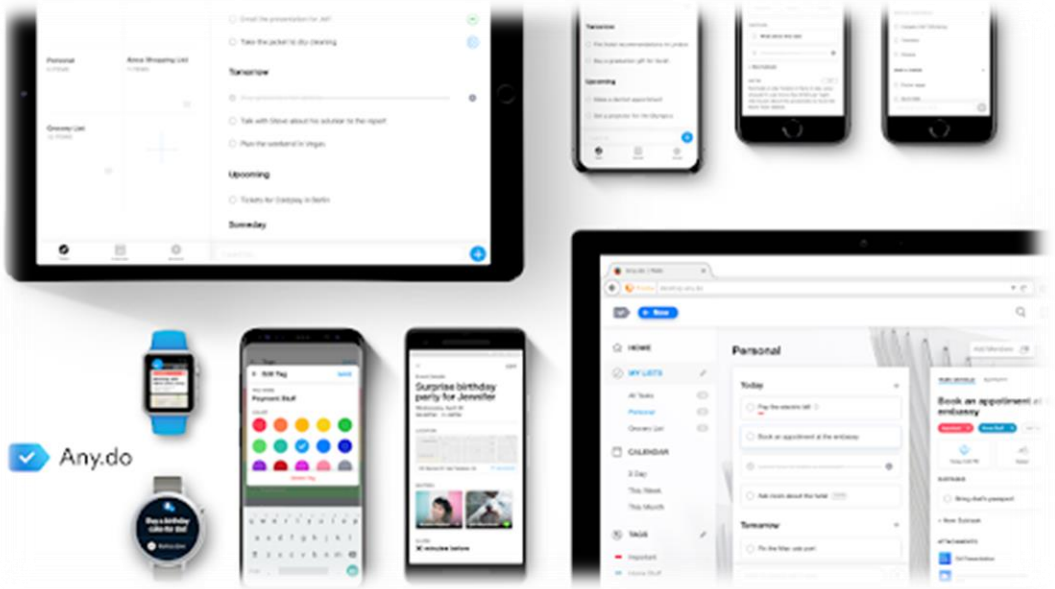
3. Programmes for the planning and recording of care related activities, appointments and medication administration.

Organiser of appointments, activities and lists (e.g. shopping or to-do lists). Examples:

Any.do

https://www.any.do/





Key ICT to support caregiving

3. Programmes for the planning and recording of care related activities, appointments and medication administration.

Organiser of appointments, activities and lists (e.g. shopping or to-do lists). Examples:

Lotsa Helping Hands

https://lotsahelpinghands.com/

todoist

https://todoist.com/

Google Keep

https://keep.google.com/

Microsoft To Do

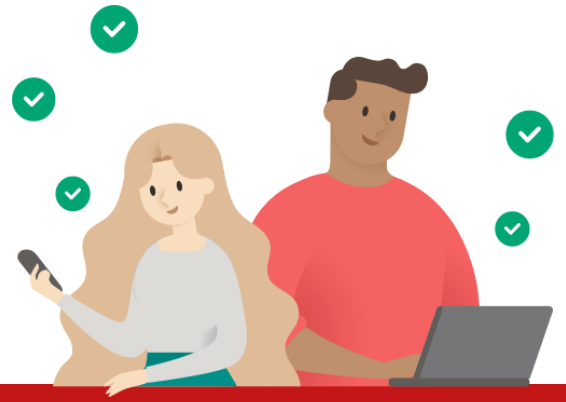
https://todo.microsoft.com/

meister task

https://www.meistertask.com/

TickTick

https://ticktick.com/



Key ICT to support caregiving

3. Programmes for the planning and recording of care related activities, appointments and medication administration.

Medication management: pill dispensers with visual, audio and/or phone alerts, and notifications if the person does not take the medication. Examples:

MedReady Inc.

https://www.medreadyinc.net/

Video link

MedMinder™

https://www.medminder.com/

Key ICT to support caregiving

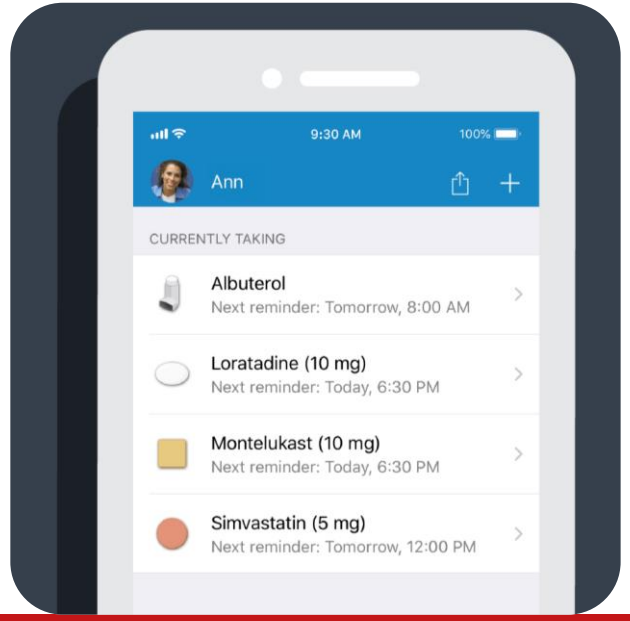
3. Programmes for the planning and recording of care related activities, appointments and medication administration.

Medication management: apps with med and refill reminders, notifications if the person does not take the medication, and communication with social and health care teams. Examples:

Medisafe

https://www.medisafeapp.com/

Videos link



Key ICT to support caregiving

3. Programmes for the planning and recording of care related activities, appointments and medication administration.

Medication management: full-service pharmacy, which is responsible for sorting the medication by date and time, delivering them to your home every month, automatically monitoring and managing refills, and organizing all the medication, billing, and prescription details in the same place for easy access. Examples:

https://www.pillpack.com/

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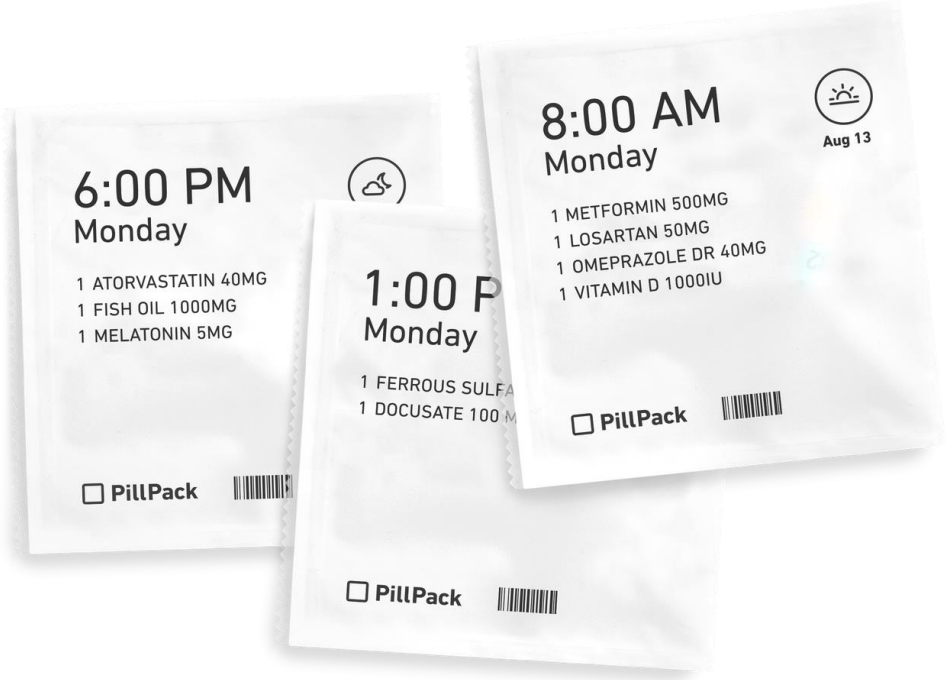
Video link



https://www.pillpack.com/

Pill Pack

Key ICT to support caregiving

3. Programmes for the planning and recording of care related activities, appointments and medication administration.

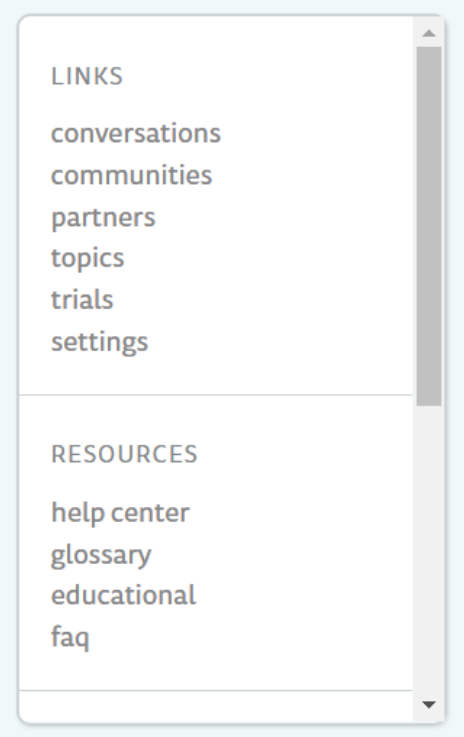
Personalized voice reminders.
Examples:

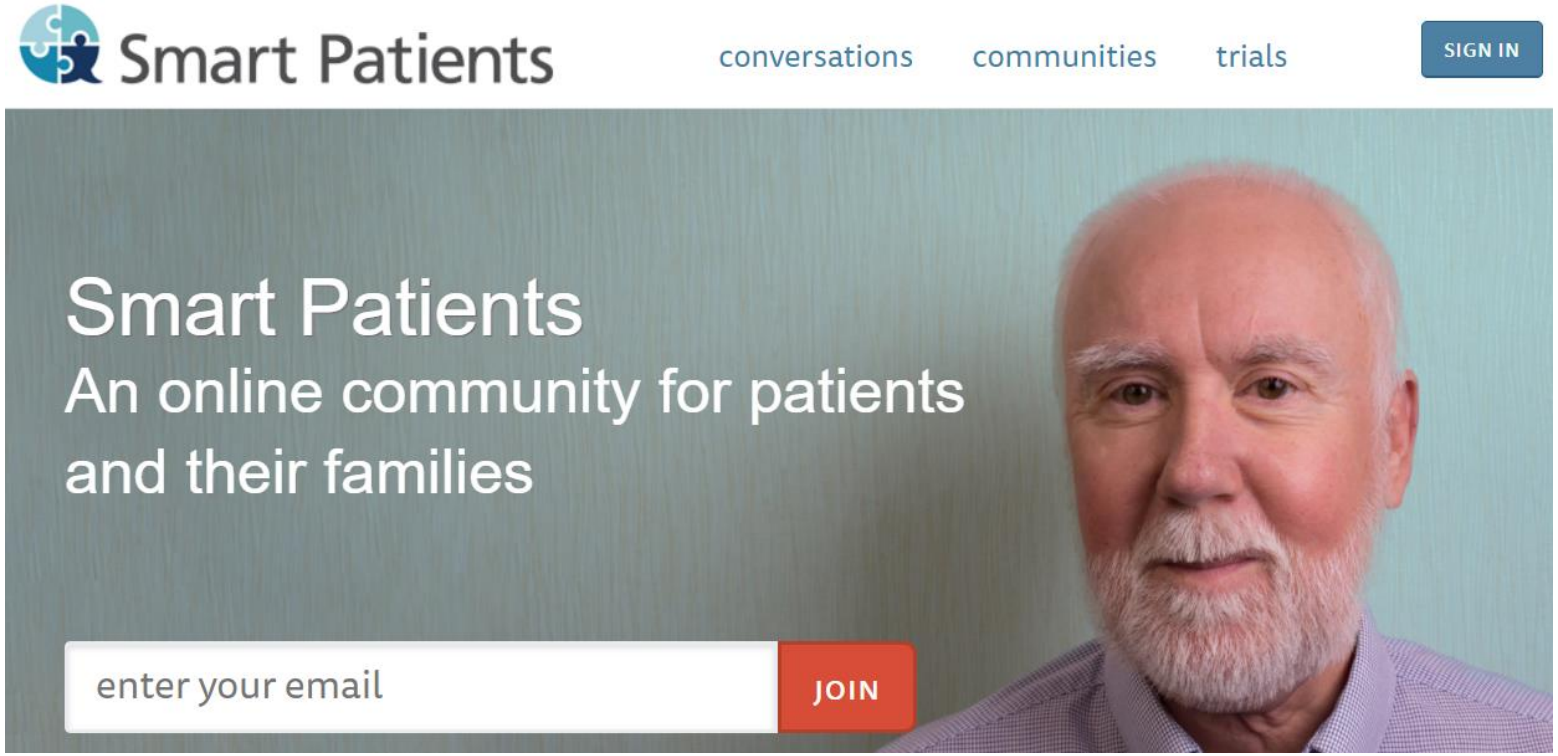
https://rosie2.com/

Video link

Key ICT to support caregiving

4. Platforms or applications to meet other caregivers and exchange experiences and knowledge.

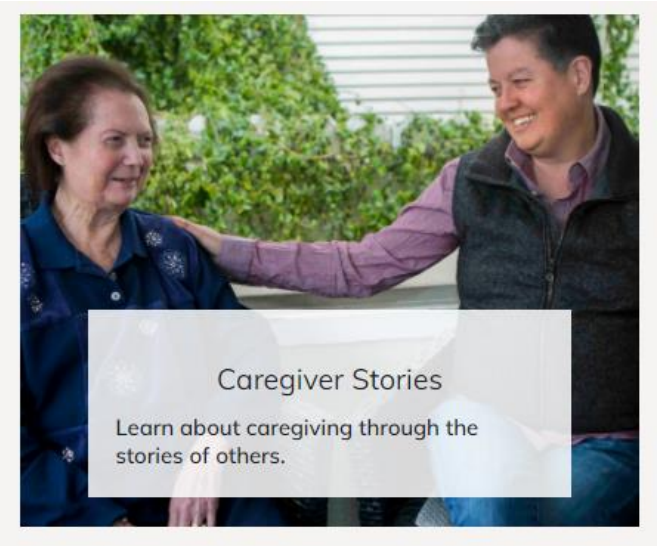




https://www.smartpatients.com/

Key ICT to support caregiving

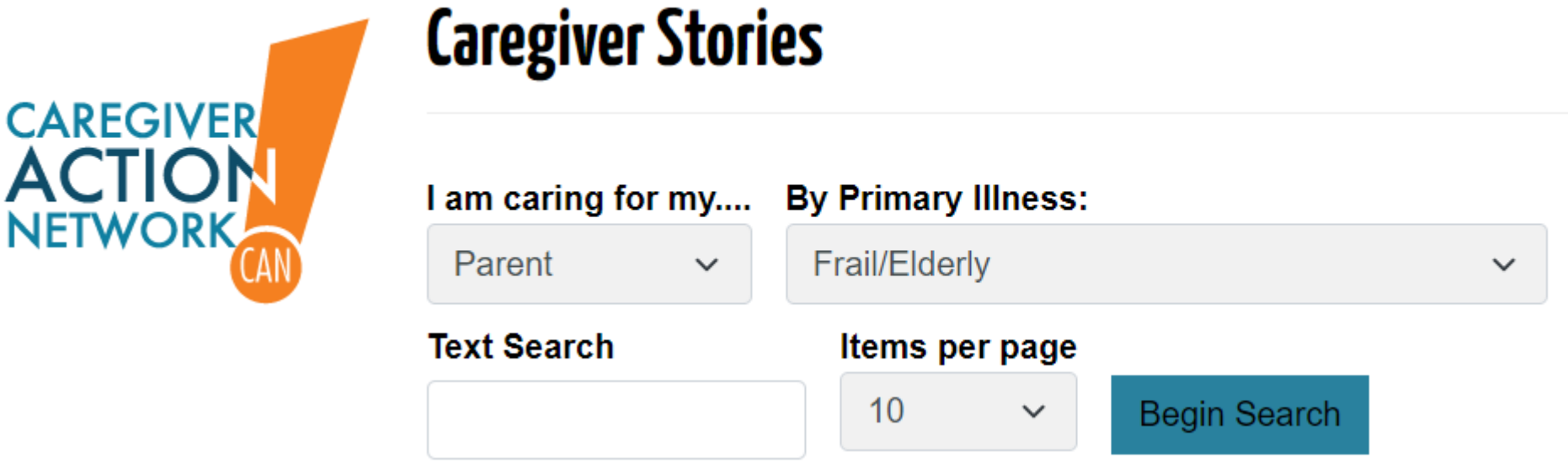
4. Platforms or applications to meet other caregivers and exchange experiences and knowledge.



https://www.caregiver.org/connecting-caregivers/

Key ICT to support caregiving

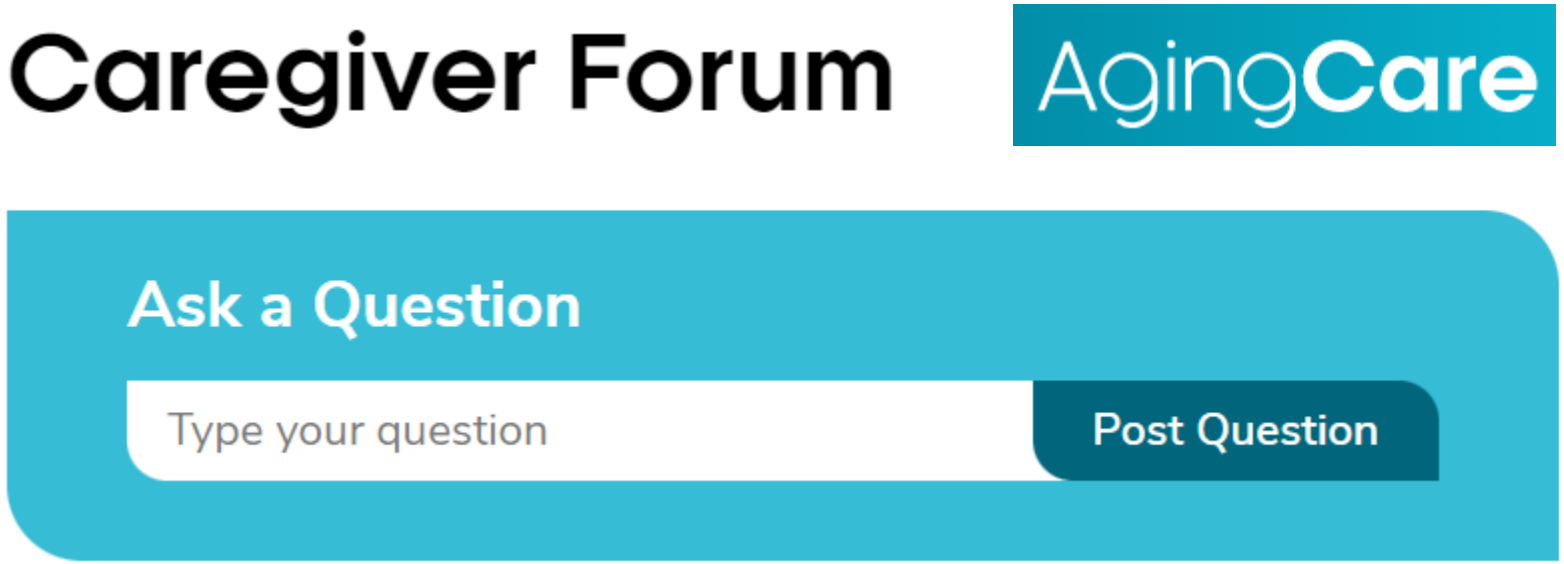
4. Platforms or applications to meet other caregivers and exchange experiences and knowledge.



https://www.caregiveraction.org/family-caregiver-story-project

Key ICT to support caregiving

4. Platforms or applications to meet other caregivers and exchange experiences and knowledge.

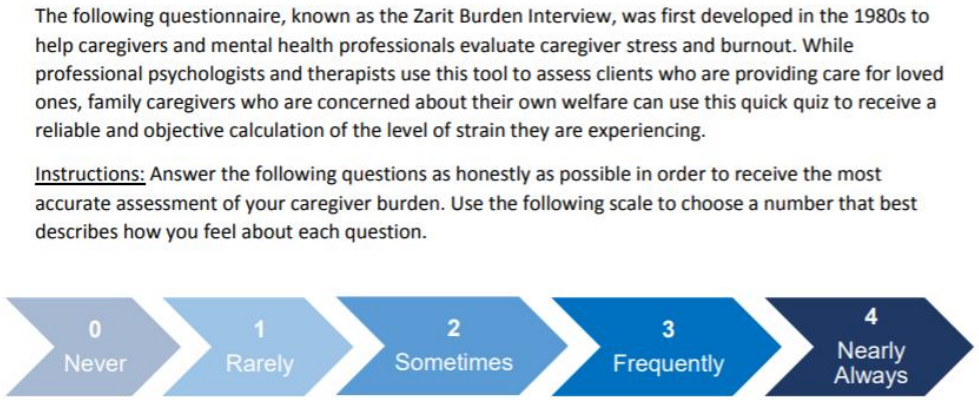


https://www.agingcare.com/caregiver-forum

Key ICT to support caregiving

5. Self-assessment procedures for caregiving burden, to periodically self-assess whether the caregiver is in a situation of overload and recognises the need for help and support.

- Caregiver Self-Assessment Questionnaire: https://www.caregiverslibrary.org/Portals/0/CaringforYourself_CaregiverSelfAssessmentQuestionaire.pdf
- Zarit Burden Interview: https://www.agingcare.com/documents/caregiver_burden_assessment.pdf



The following questionnaire, known as the Zarit Burden Interview, was first developed in the 1980s to help caregivers and mental health professionals evaluate caregiver stress and burnout. While professional psychologists and therapists use this tool to assess clients who are providing care for loved ones, family caregivers who are concerned about their own welfare can use this quick quiz to receive a reliable and objective calculation of the level of strain they are experiencing.

Instructions: Answer the following questions as honestly as possible in order to receive the most accurate assessment of your caregiver burden. Use the following scale to choose a number that best describes how you feel about each question.

Introduction

Module	4. MANAGEMENT IN CAREGIVING
Sub-module	4.5. ICT applied to caregiving
Lesson nr.	#3
Duration (minutes)	120
Date	

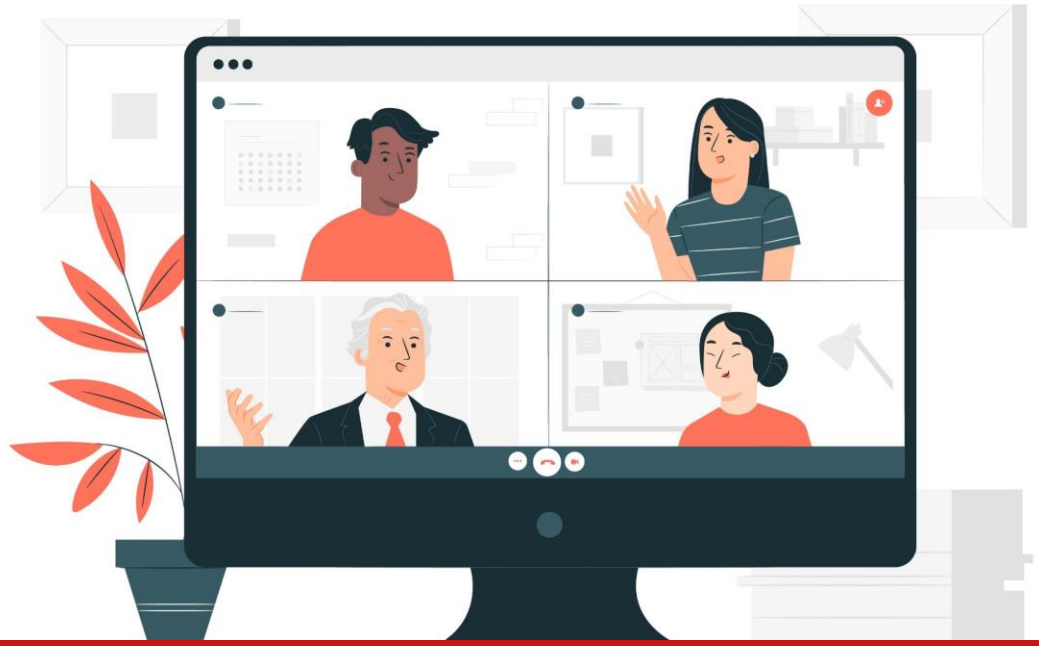
Main ICT for leisure, social participation, and education

1. Social networks and video-conference applications.
2. Platforms for free downloading and viewing of short films, movies, music, and books.
3. Websites to explore tourist attractions and take virtual tours.
4. Apps with relaxation contents.
5. e-learning platforms for different subjects of interest, such as languages.

Main ICT for leisure, social participation, and education

1. Social networks and video-conference applications.

Image extracted from: https://www.freepik.es/vectores/negocios



Main ICT for leisure, social participation, and education

1. Social networks and video-conference applications.

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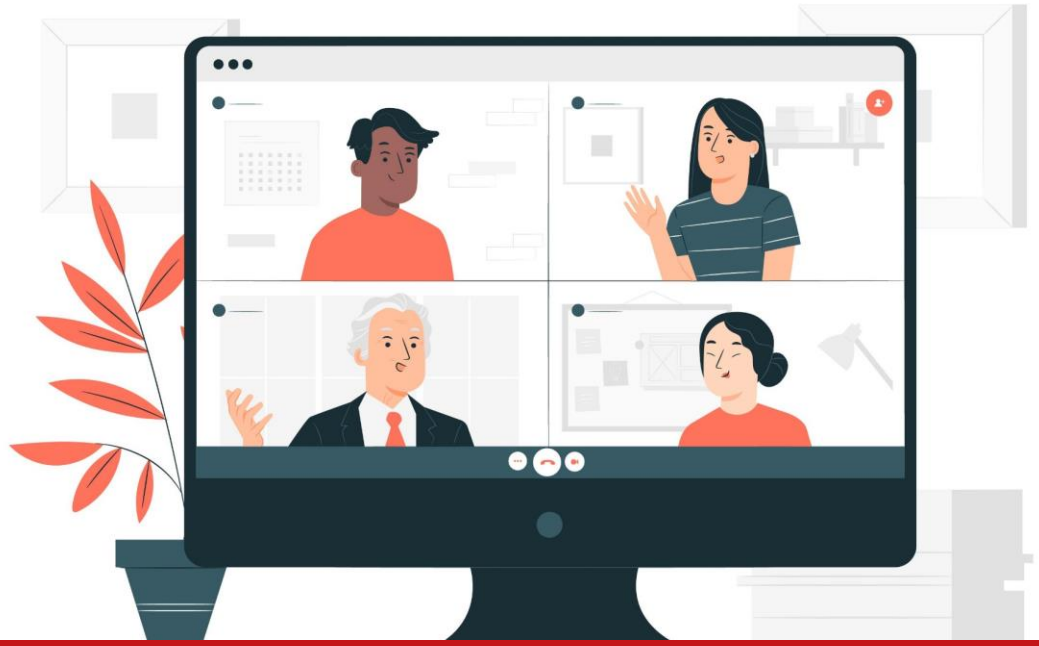


Main ICT for leisure, social participation, and education

2. Platforms for free downloading and viewing of short films, movies, music, and books.

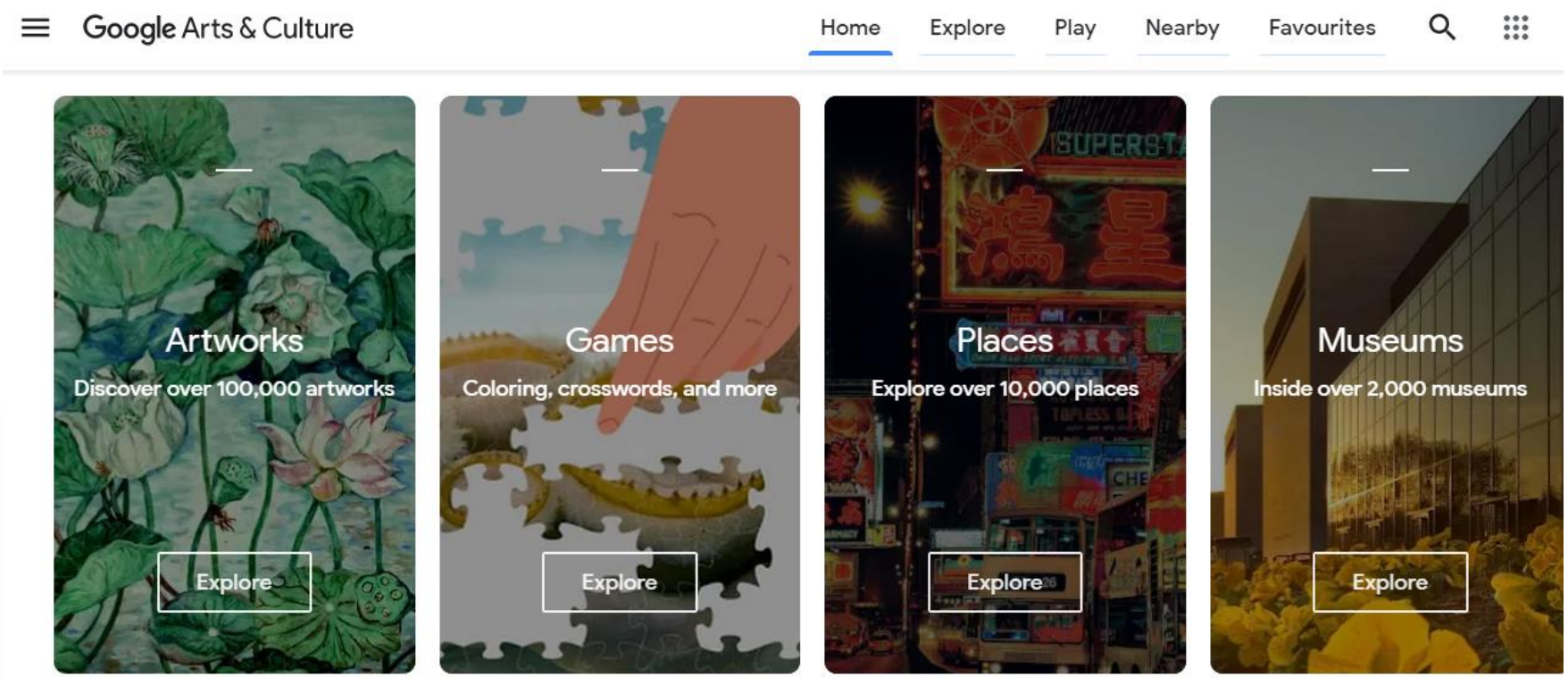
Short films and movies	Music and audio	Books
• https://archive.org/ • https://filmshortage.com/ • https://www.filmsshort.com/ • https://www.lecinemaclub.com/ • https://www.nowness.com/ • https://www.pocketmovies.net/ • https://shorts.tv/ • https://thinkshorts.com/ • https://www.viddsee.com/ • https://www.youtube.com/	• https://archive.org/ • https://www.bensound.com/ • https://www.chosic.com/ • https://freemusicarchive.org/ • https://www.jamendo.com/ • https://www.mp3juices.cc/ • https://okmusi.com/ • https://www.reverbnation.com/ • https://www.soundclick.com/ • https://soundcloud.com/ • https://www.youtube.com/	• https://archive.org/ • https://www.free-ebooks.net/ • https://freeditorial.com/ • https://www.gutenberg.org/ • https://manybooks.net/ • https://www.obooko.com/ • https://openlibrary.org/

Main ICT for leisure, social participation, and education

3. Websites to explore tourist attractions and take virtual tours.

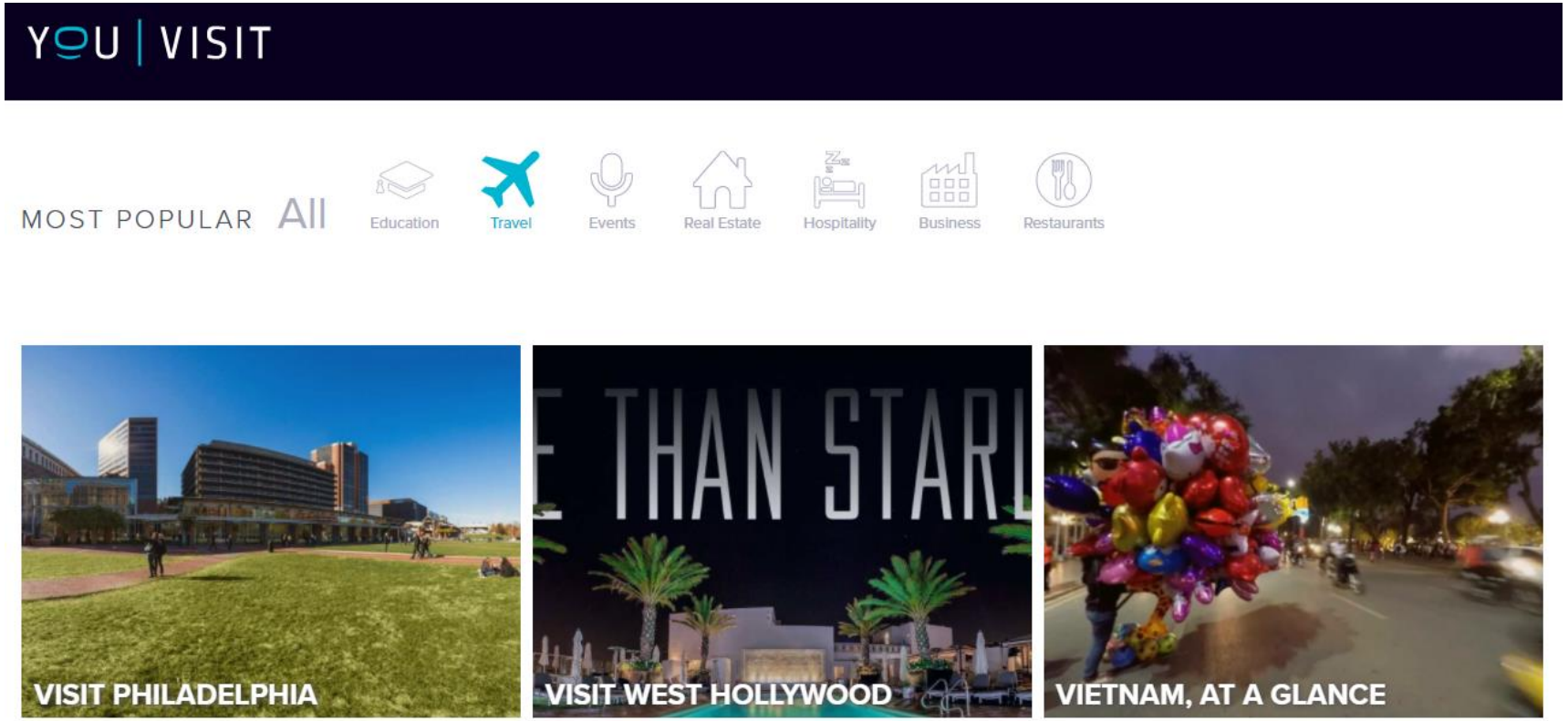
Google Arts & Culture

https://artsandculture.google.com/



Main ICT for leisure, social participation, and education

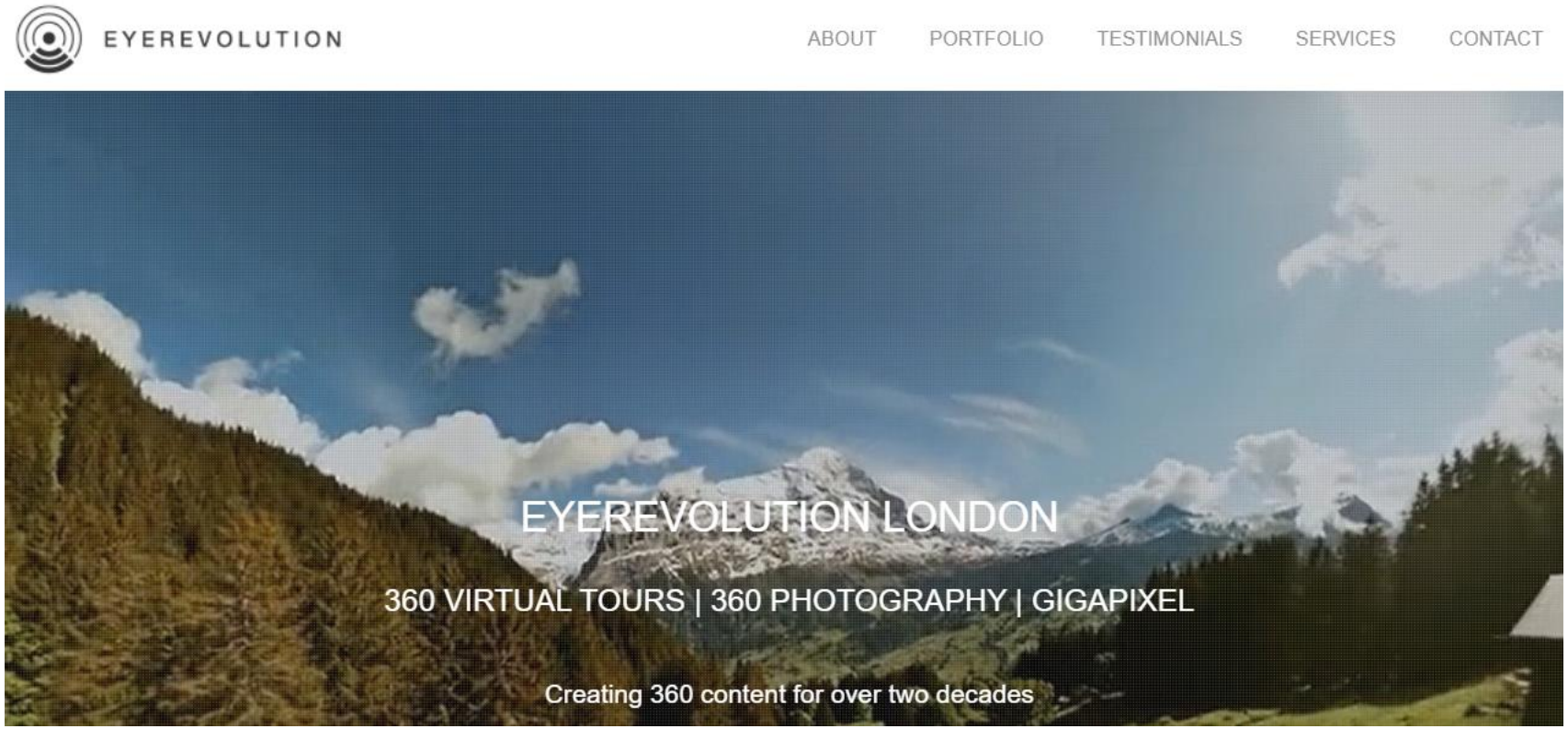
3. Websites to explore tourist attractions and take virtual tours.



https://www.youvisit.com/travel

Main ICT for leisure, social participation, and education

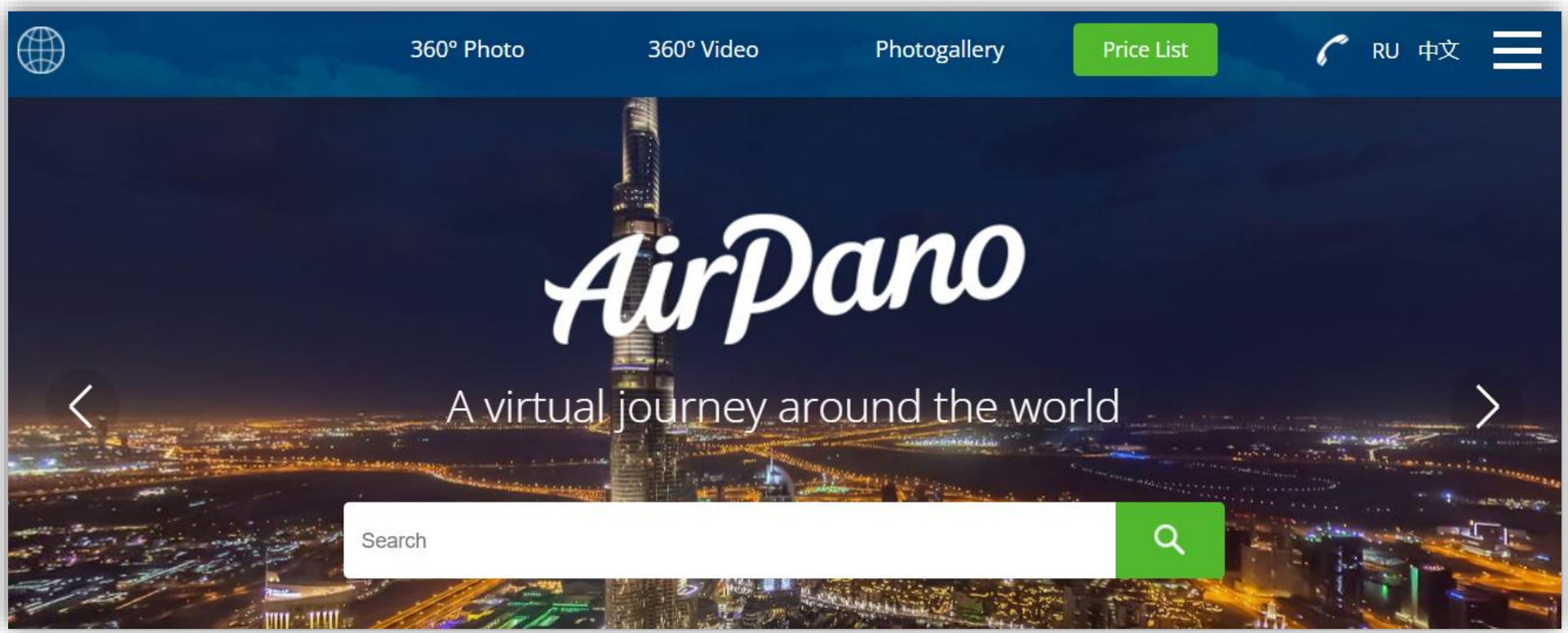
3. Websites to explore tourist attractions and take virtual tours.



https://www.eyerevolution.co.uk/virtual-tours/

Main ICT for leisure, social participation, and education

3. Websites to explore tourist attractions and take virtual tours.



https://www.airpano.com/

Main ICT for leisure, social participation, and education

4. Apps with relaxation contents.

InsightTimer

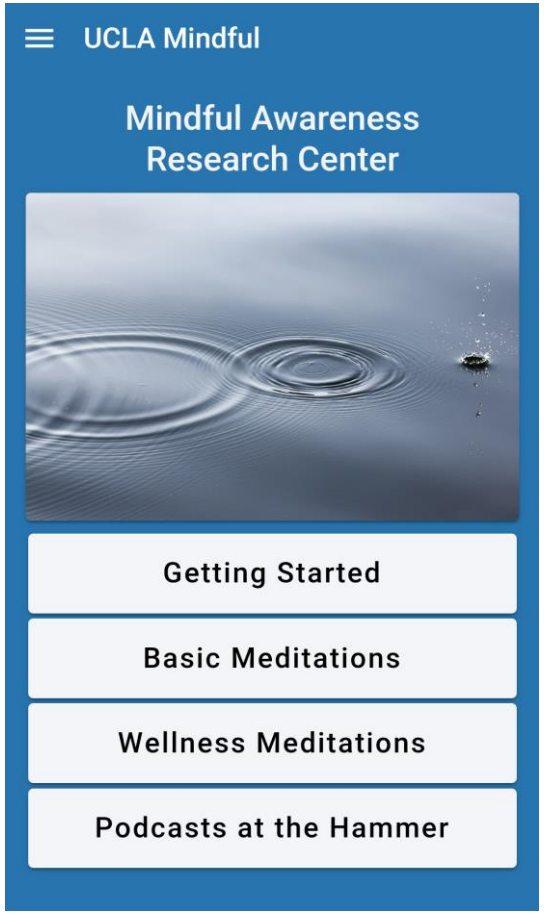
https://insighttimer.com/

mindworks

https://mindworks.org/

SMILING MIND

https://www.smilingmind.com.au/



https://www.uclahealth.org/ucla-mindful

Main ICT for leisure, social participation, and education

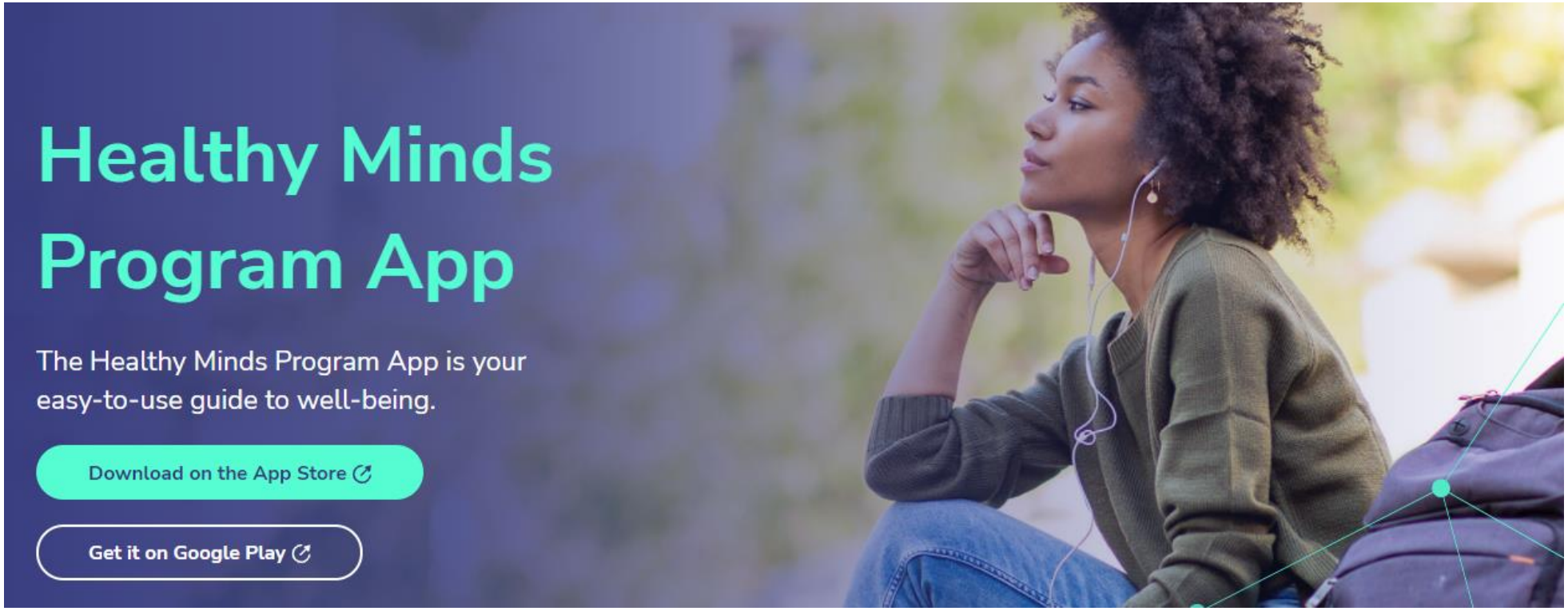
4. Apps with relaxation contents.

https://my.life/

Main ICT for leisure, social participation, and education

4. Apps with relaxation contents.

https://hminnovations.org/meditation-app



Main ICT for leisure, social participation, and education

4. Apps with relaxation contents.

AURA

https://www.aurahealth.io/

Main ICT for leisure, social participation, and education

5. e-learning platforms for different subjects of interest, such as languages.

https://formacion.miriadax.net/

https://www.edx.org/

https://www.skillshare.com/

https://www.udemy.com/

https://www.coursera.org/

Main ICT for leisure, social participation, and education

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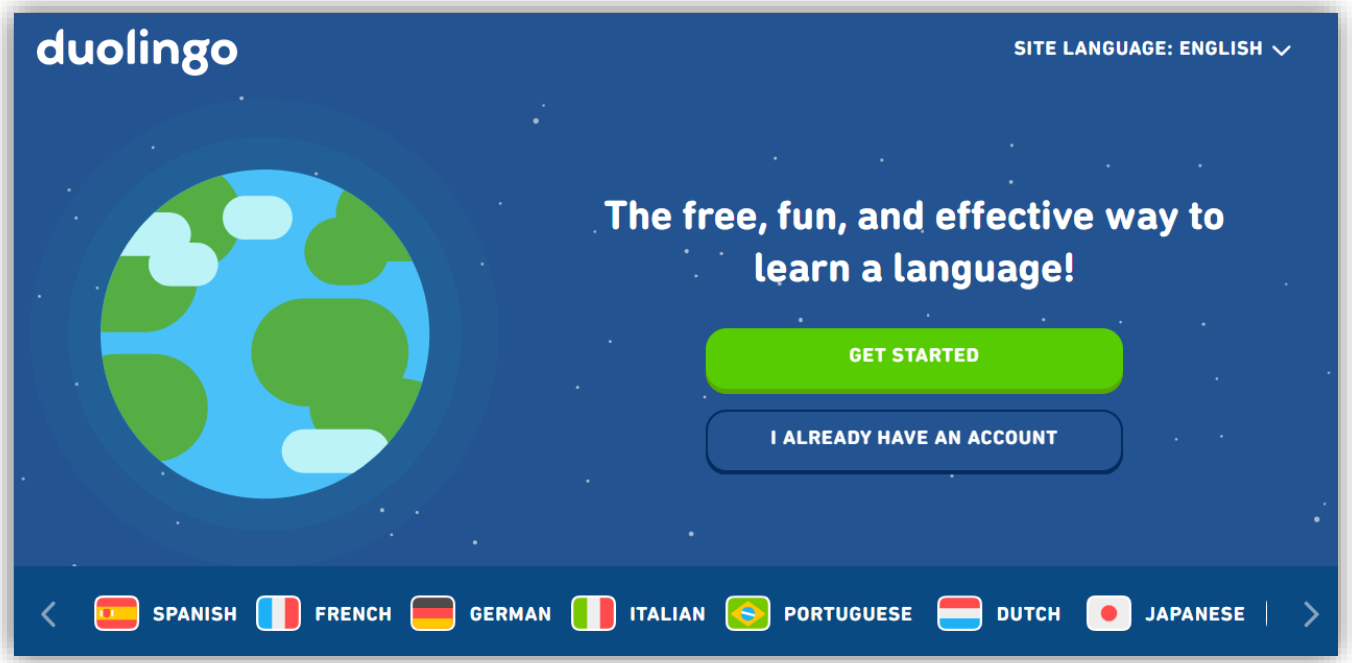

https://www.duolingo.com/

Main ICT for leisure, social participation, and education

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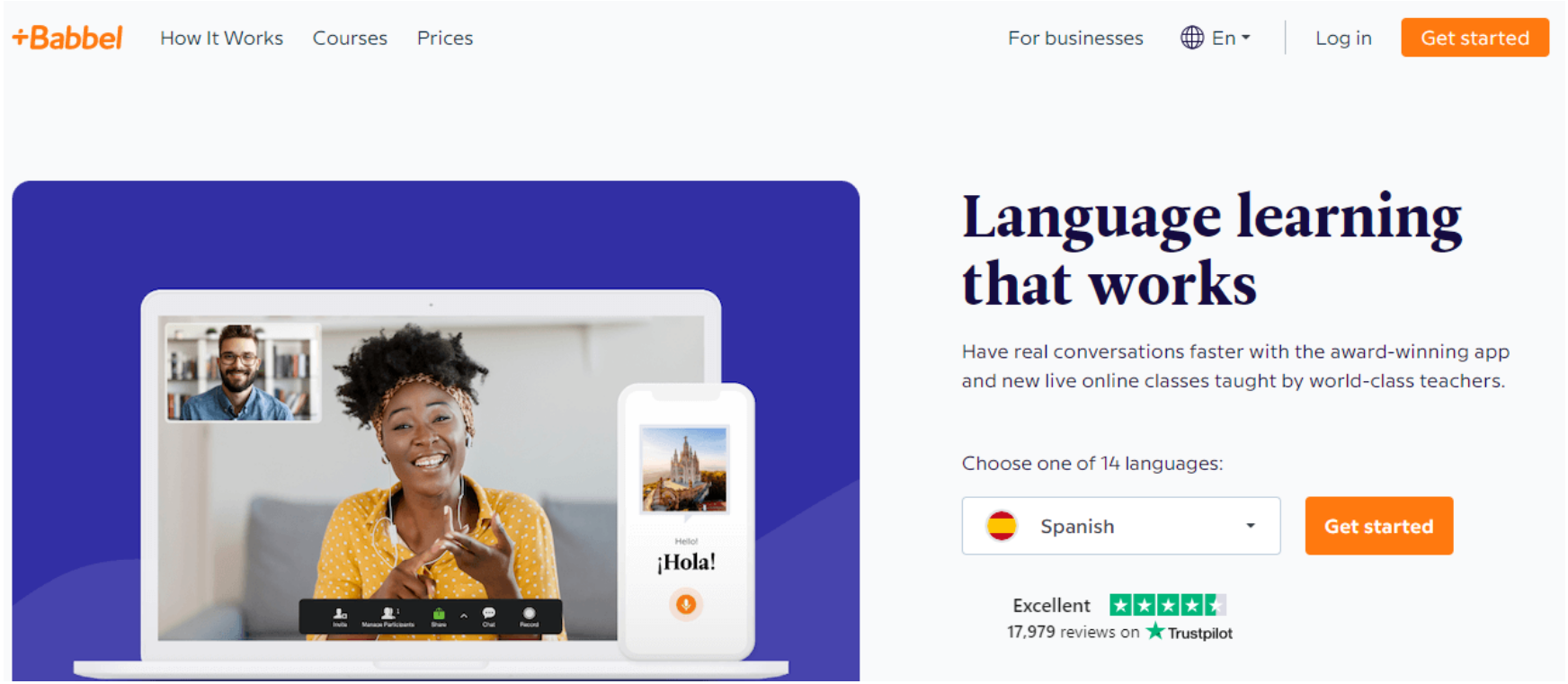

https://uk.babbel.com/

Main ICT for leisure, social participation, and education

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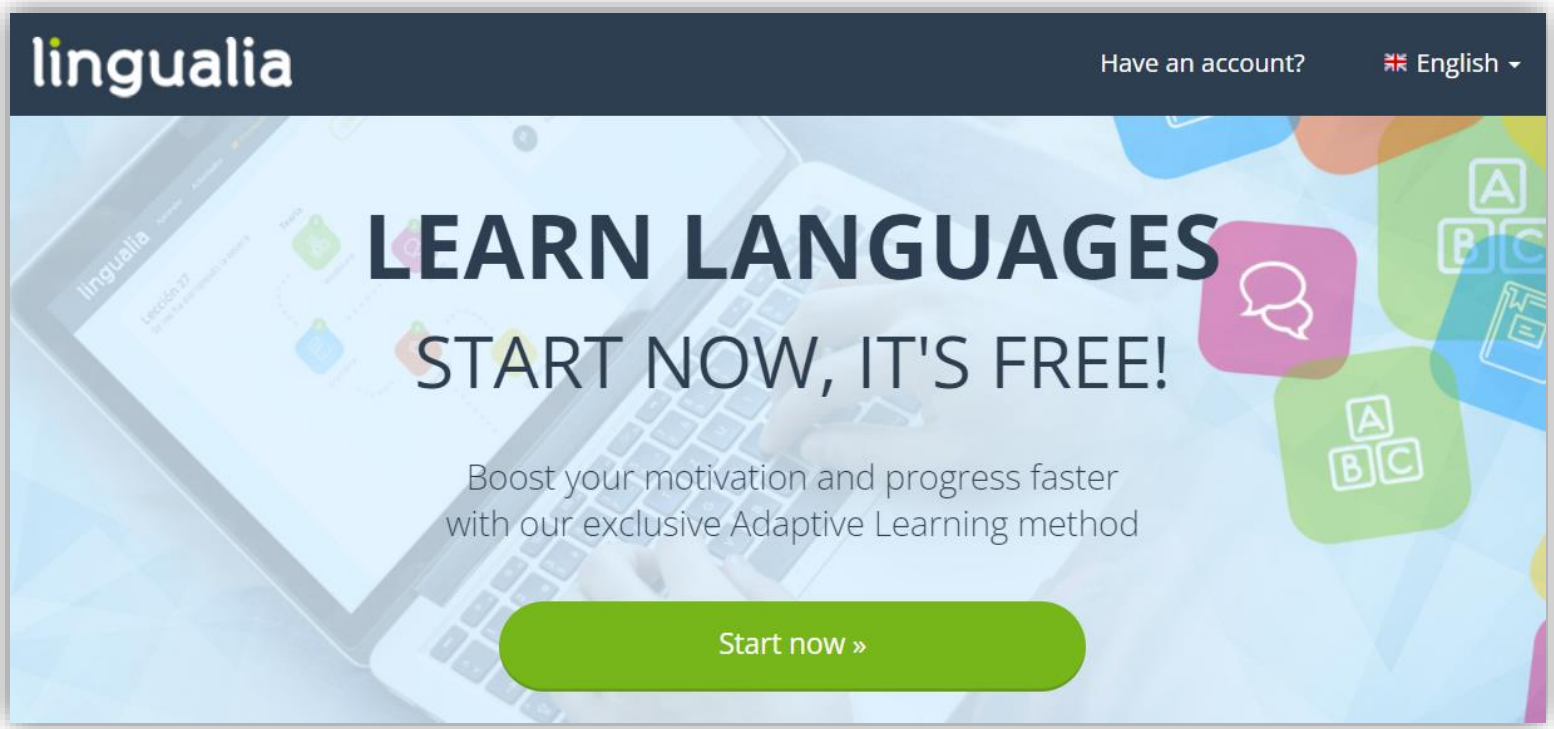

https://www.lingualia.com/

Introduction

Module	4. MANAGEMENT IN CAREGIVING
Sub-module	4.5. ICT applied to caregiving
Lesson nr.	#4
Duration (minutes)	30
Date	

Guidelines for safe and risk-free use of ICT

1. Ethical considerations in the application of ICT in caregiving.
2. Ethical considerations in the use of ICT in the personal domain of caregivers (leisure, social participation, and education).
3. Keys to staying safe in the use of ICT, and avoiding risks.

Guidelines for safe and risk-free use of ICT

1. Ethical considerations in the application of ICT in caregiving.
2. Ethical considerations in the use of ICT in the personal domain of caregivers (leisure, social participation, and education).

The ethical use of ICT is characterised as:

- **Democratic**. Accessible and usable by everyone, without any barriers.
- **Relevant**. Balanced use, responding to the specific needs of each individual.
- **Pertinent**. Use that does not cause harm to itself or others.

Rodríguez-Porrero & Gil, 2014 (http://www.ceapat.es/interpresent3/groups/imserso/documents/binario/eticaytic.pdf)

Guidelines for safe and risk-free use of ICT

1. Ethical considerations in the application of ICT in caregiving.
2. Ethical considerations in the use of ICT in the personal domain of caregivers (leisure, social participation, and education).

"Ethics is a controversial concept that is difficult to fit into a set of rules that allow us to behave, or to expect others to do so." Rodríguez-Porrero & Gil, 2014

"It is not, therefore, a question of questioning the use or non-use of technologies for fear that they may be misused. On the contrary, it could be said that ICT are a right that facilitates (...) the personal autonomy", social inclusion and equal opportunities for the population. García-Férez, 2003

Guidelines for safe and risk-free use of ICT

Respect the **dignity** of the person

Do not violate the **privacy** of the individual

Ensure **confidentiality** of data

Guarantee individual **autonomy**, **freedom** to make one's decisions, and **independence**

Avoid "technological paternalism"

Guidelines for safe and risk-free use of ICT

3. Keys to staying safe in the use of ICT, and avoiding risks.

- Do not respond to or click on links you receive from unknown senders; first make sure they are from a trusted source.
- Do not open attachments from suspicious emails.
- Do not share everything you receive; analyse and verify the veracity of the information before disseminating it to those close to you.

Guidelines for safe and risk-free use of ICT

3. Keys to staying safe in the use of ICT, and avoiding risks.

- Keep the operating system up to date and do not download strange applications.
- Install an antivirus on computers or mobile devices, whenever possible.
- Do not leave your social networking, email or other online services (e.g. online banking) accounts open on public computers.

Guidelines for safe and risk-free use of ICT

3. Keys to staying safe in the use of ICT, and avoiding risks.

- Change your passwords regularly.
- Avoid using the same password for all your accounts, as well as obvious details such as your name, phone number or date of birth.
- Set up a good password (minimum 8 characters, combining uppercase, lowercase, symbols and numbers) and activate 2-step access or verification, whenever possible.

Guidelines for safe and risk-free use of ICT

3. Keys to staying safe in the use of ICT, and avoiding risks.

- Check the privacy settings on your social networks when posting content.
- Don't publish compromising information, such as details of your address or place of work, or images of other people that you don’t have permission to share.
- Don't publish everything you do, or everywhere you go.

Conclusions

"ICT-based solutions are not a panacea that will address all the difficulties faced by informal carers. However, there is now clear evidence of the positive impact that they can bring for the well-being of informal carers" and the persons they care for.

Nevertheless, while the use of ICT-based solutions is increasing in the care sector, the development of ICT tools specifically designed for informal carers is still scarce, despite their potential, so further development in this field is needed in order to meet more of the needs and demands that both carers and care recipients may have.

Eurocarers, 2020 (https://eurocarers.org/publications/information-communication-technology-ict-for-informal-carers/)

GIVINGCARE
Empowering Caregivers

Thank you!

Teachers' name

Teachers’ e-mail

Date of the session