

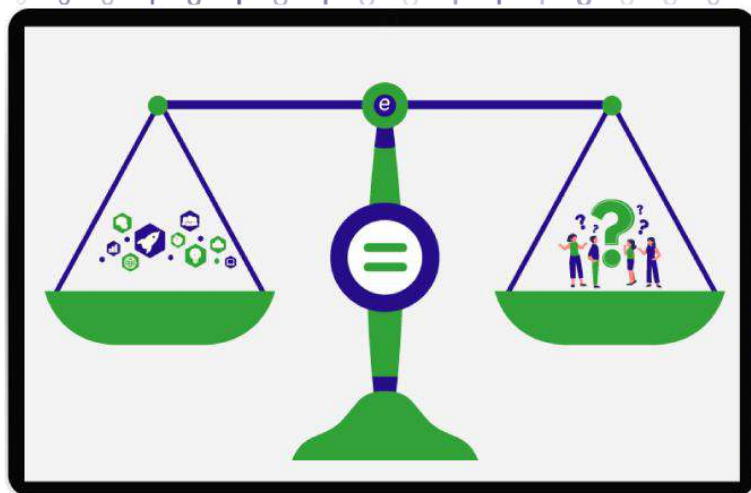


Proj. No: 2021-1-IT02-KA220-ADU-000035139

E-government everyday: adults and adult educators in action!

A preparatory course on context-based
approach and e-government for adult
educators

Project Result 2



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1. Introduction

This guide is designed to provide educators of adult learners with a comprehensive resource for teaching how to use e-government services.

The striking figures on the new European Digital Action Plan show that 39% of adult educators have insufficient digital skills and don't have adequate pedagogical skills in defining new strategies regarding e-government. As most digital adult education has focused on the first digital divide, there are no current strategies for tackling the second- and third-level digital divide. In fact, most adult centres focus on basic digital skills but do not go in the direction of autonomy in the rights exerted by adults.

We recognise that the digital divide exists at multiple levels, and our focus is primarily on the second and third levels of this divide. Therefore, we will present strategies to bridge these gaps and enable adult learners to use e-government services. We encourage educators to use a context-based approach in teaching e-government and offer practical activities for each domain to facilitate learning.

Besides, to enhance their digital skills and cover some knowledge gaps regarding the usage of certain e-government domains, the educators can use the materials of the second part of the course, developed for low-skilled adults.

Based on an e-government competencies framework created in the first result of the project, we have also prepared some ready-to-use materials for educators (Toolkit) that they can use when teaching e-government. This framework can further serve as a basis for adult educators to develop their complementary materials for the classes and self-paced learning materials for their adult learners.

2. Different types of digital divide and strategies the educator can apply to overcome them

We have already touched the topic of digital divide in “Sustainable Digital Education Goals” where we distinguished between the 3 levels of it:

- First digital divide or access divide: refers to the gap between those who have access to digital technologies such as computers, smartphones, and the internet, and to the internet and those who do not.
- Second digital divide or usage divide refers to the gap between those with the skills and knowledge to use digital technologies effectively and those without.
- Third digital divide or quality of use gap: refers to the offline benefits and outcomes people obtain from the usage of ICT.

Based on the DESI 2022 report, an impressive 92% of households in the EU were connected to the internet in 2021, indicating a significant achievement. It makes us therefore shift our focus to the upper levels of digital divide, as nowadays the problem in Europe is not so much a physical connectivity and access to internet and technologies, but rather the disparities in digital literacy and skills as well as the outcomes of internet access. It is crucial to recognize that simply reducing the disparity in access without addressing how information and communication technologies (ICTs) are utilised may worsen inequality, as digitalisation can exacerbate rather than diminish it (Azzolini, 2017).

In our course, we make an emphasis on the second and third levels of digital divide as most of digital education for adults doesn't go further than first level providing access to the technologies and only basic digital skills. We aim to equip adults with necessary skills to use e-government, as the citizens are meant to be the main beneficiaries of these online services. Specialised technologies are being actively developed to cater to the specific requirements of older individuals in different areas such as healthcare, leisure, learning, and daily activities. These advancements' primary goal is to enhance older adults' well-being, encourage active ageing, and ultimately improve their overall quality of life (Berkowsky, 2017).

On the one hand, over the past ten years, the accessibility of public services on the internet has been increasing steadily. The COVID-19 pandemic further hastened this trend, as digital communication became the standard. The Digital Decade aims to have all important public

services for both individuals and companies available online by 2030. Moreover, nowadays some services can be effectuated only with the previous online interaction, like for example to book a previous appointment to any administrative institution or filling in some online forms before you get attended etc.

On the other hand, as shown by the results of the survey conveyed within this project (R1), many adults do not fully use the existing online government services mostly due to their lack of knowledge, skills, confidence and trust. It also proved that most educators don't teach e-government to their adult learners. Global digitalisation and this movement towards all public services available online will make the usage and the quality of use gap every time bigger depriving many adults of their full social participation, their autonomy and exertion of their rights.

2.1 Strategies to overcoming digital divide

In addressing the second and third digital divides, the key measures to be implemented primarily revolve around education. It is crucial for citizens to acquire digital skills so that they can effectively navigate and utilise these technologies, as well as create and communicate messages using them (Cabrero j., 2017). Skill deficiencies among older adults have been identified as a significant barrier to adopting e-government services, irrespective of their formal educational attainment. This highlights the need for specialised learning activities tailored to older citizens in the European Union. Training programs that focus on improving the ICT skills of older adults can help them overcome concerns and doubts associated with new technology (Valerija Botrić & Ljiljana Božić, 2021). Providing appropriate technology training is essential for older adults to interact with and explore innovative technologies, enhance their skills, expand their knowledge and experiences, and most importantly, boost their confidence and willingness to embrace new technologies (Qi Ma, 2020). According to Henderson's study conducted among older adults in Stafford County, VA, it was discovered that older individuals are not only willing but also capable of learning how to use technology when given the opportunity. Therefore, organising technology seminars or learning sessions specifically designed for them can help reduce the knowledge gap (Henderson, 2019).

Since one of the most effective strategies for bridging the second and third digital divides is to provide relevant training, we follow this path and focus on designing specific programme to develop and improve adults' digital skills for the use of e-government.

The current situation of digital divide underscores the importance of comprehending the role of e-government training programmes and the importance of digital inclusion

concerning e-government services. It is essential to recognise and appreciate the contribution of these training programmes in equipping people with the necessary skills and knowledge to effectively access and use e-government services. Digital inclusion plays a crucial role in ensuring that all members of society have equal opportunities to engage with and benefit from e-government services. By prioritising digital inclusion and implementing comprehensive training programmes, governments can bridge the digital divide and empower citizens to actively participate in e-government services for their own advancement and society as a whole (Sohail Raza Chohan et al., 2020).

2.2 E-government learning programme for adult learners

When it comes to designing e-government learning programmes for adults we can consider the following components:

1. Introduction to e-government: Provide an overview of e-government services, their purpose, and the benefits they offer to citizens. Explain how e-government can improve access to public services, streamline processes, and enhance civic engagement.
2. Digital skills training: Offer comprehensive training on essential digital skills required to access and utilise e-government services. This can include basic computer skills, internet navigation, email usage, online form filling, and file management.
3. E-government platforms and services: Familiarise learners with the specific e-government platforms and services available in their region or country. Guide them on how to access government websites, locate relevant services, and complete online transactions securely.
4. Online safety and security: Educate adults about the importance of online safety and security when engaging with e-government services. Teach them how to protect personal information, recognize and avoid online scams, and use strong passwords.
5. Practical demonstrations and hands-on practice: Provide practical demonstrations of common e-government tasks, such as applying for government benefits, renewing licences or permits, or submitting tax forms. Allow participants to practice these tasks in a guided setting.
6. Rights and responsibilities: Educate adults about their rights and responsibilities as e-government users, including privacy rights, data protection, and digital citizenship. Emphasise the importance of responsible and ethical online behaviour.

7. Building confidence and empowerment: Foster a supportive learning environment that encourages adults to overcome any fears or reservations they may have about using technology and engaging with e-government services. Focus on building their confidence and empowering them to take advantage of the benefits offered by e-government.

8. Real-life applications and case studies: Share real-life examples and case studies that demonstrate how e-government services have positively impacted individuals and communities. This can help adults understand the practical relevance and potential of e-government in their own lives.

By including these components in specific learning programs on e-government, adults can develop the necessary skills, knowledge, and confidence to effectively engage with e-government services and fully participate in the digital realm.

It is also important to provide a continuing guidance on problem-solving techniques and offer ongoing support in their learning process.

Another important aspect to consider is the motivation of learners, as it plays a significant role in their engagement and success. Adults are motivated if the subject is relevant to their personal or professional lives. Adult learners are often motivated by learning experiences that offer immediate practical application. When they can see how the knowledge or skills they have acquired can be applied in real-life situations, their motivation is reinforced.

In our course on e-government for adults, we highlight all the benefits that each e-government area offers and explain how it can improve their lives and give them more autonomy and independence, as well as better integration into society. All these benefits - practicality, autonomy and inclusion increase learners' motivation. We first try to change attitudes and create a desire to discover e-government and then to start using its services on a regular basis.

We also apply a contextual approach, which is the key element of our course. It is very practical and based on the situations adults face in their daily lives. Researchers widely agree that older people are open to and adopt new technologies if they perceive and experience the potential for these technologies to enhance their lives and fulfil their needs (Chen K. & Chan A, 2011). Later in this guide, you will learn more about the context-based approach to education.

3. Context-based learning

Different teaching methods share a common goal of actively engaging students in learning, not just to increase their knowledge but also to cultivate lifelong learning habits with lasting benefits. Contextual teaching and learning is one such approach among many. Especially, such an approach is appealing among adults as it focuses on their relations with their environment, as well as with their social skills, to concretely review everyday issues and situations, and learn concepts by experience.

Applying this approach in teaching e-government can enhance the relevance, engagement, critical thinking, application of knowledge, and life-long learning habits of students in the context of different e-government areas: e-payment, e-health, e-leisure, e-participation and e-education.

First, we need to understand what this new teaching methodology consists of and how educators can benefit from preparing students in a specific context with this methodology.

Context-based learning is a teaching or learning method based on theory and practice, where ideas are part of the learning process, with an emphasis on understanding the context in which the learning takes place. According to Burns and Erikson, "Contextual Teaching and Learning (CTL) helps students connect the content they are learning to the life contexts in which that content could be used. Students then find meaning in the learning process." (Burns and Erikson, 2001). In this way, the learner feels more involved in the learning process and is therefore more motivated, as mentioned in the Number & Dyslexia blog. "This approach is particularly relevant in education today, as it helps to make learning more meaningful and relevant to students, and prepares them for the real world by encouraging them to think critically and problem-solve in authentic, real-world contexts". (Sharma, 2023). It is rather a learner- than teacher oriented approach, prioritising the role of student over the teacher. It encourages learners to assume responsibility for their own learning and make connections between knowledge and its practical use in different aspects of their lives (Satriani et al., 2012).

To get a better idea of this teaching method, it has proven to be mainly a method where the background is important for students' learning, in addition to the overall motivation to learn within the framework of their needs, as Timmer mentions,: "The process of CBL involves students being provided with a scenario, and undertaking a student-led process of hypothesising, which ultimately results in the development of the student's own learning needs". (Timmer et al 2009).

In the context of e-government teaching, CTL involves designing learning experiences that enable students to understand and engage with e-government concepts, systems, and practices within the broader context of governance and public administration. It goes beyond theoretical knowledge by emphasising the practical application of e-government principles in real-world scenarios.

CTL in e-government teaching may include activities such as analysing case studies of e-government implementations, exploring e-government websites and platforms, participating in key community decision-making processes, exploring online learning platforms, using online health services, conducting online financial transactions and learning the basics of safe navigation, etc.

This approach encourages students to take an active role in their own learning, fostering critical thinking skills, problem-solving abilities, and an understanding of the relevance and impact of e-government in society. It aims to equip students with the knowledge, skills, and mindset needed to navigate and contribute to the evolving field of e-government.

3.1 Advantages of contextual approach

The following table shows how helpful this contextual methodology is, as it places the learning material in a context that allows students to apply their own knowledge based on their own needs, which means that this knowledge can be extended to the full learning potential depending on the collection of the material inside and outside the classroom as indicated (De Jong, 2008).

Phase of context-based teaching	Aim of the phase
Offering an introductory context.	Evoking students “need-to-know”, that is, students’ questions.
Collecting and adapting students’ questions	Preparing students for finding answers by learning about relevant concepts.
Offering a follow-up inquiry context	Evoking students ‘need-to-apply’ their knowledge.

This method also promotes collaboration between students, and fosters their critical thinking. Based on their own needs, students find answers to their own questions using information from the Internet, which leads to the promotion of problem-solving skills and improves retention and transfer of learning.

In addition, the author mentions some advantages that the learning context offers to prepare students for real world application and increase learner engagement (Milliken, 2022):

- The ability to create custom and tailored simulations that put learning into context
- The relevance of the content delivers unmatched engagement that maximises retention and application
- Learners are able to apply new concepts and hone their skills in a safe environment
- The learning process is interactive and highly practical
- Learners prepare for real-world challenges

With these benefits, educators can use this teaching method for adult learners to improve their digital literacy skills and also increase their knowledge of e-government areas where students with little knowledge can develop in an e-government literacy framework.

This information can serve as a basis for educators to develop ideas for organising their own learning activities based on the e-government context.

3.2 Context-based learning activities

When teaching e-government to ensure effective instruction, there are some general steps that the educator can follow despite of the area:

1. **Assess prior knowledge:** Begin by assessing the adults' existing knowledge and experience with the e-government area. This will help identify any knowledge gaps and tailor the instruction accordingly.
2. **Explain the benefits:** Provide a clear explanation of the benefits and advantages of using each area of e-government. Emphasise the convenience, speed, and security aspects, and highlight how it can simplify their daily lives.
3. **Demonstrate the process:** Use step-by-step demonstrations to walk learners through the process of using each domain key platforms.

4. Provide hands-on practice: Give learners the opportunity to practice using demonstrated platforms in a safe and controlled environment. Provide samples or scenarios for them to complete, allowing them to gain confidence and proficiency in using the platforms and tools.
5. Address security concerns: Discuss the importance of online security and how to protect personal and financial information when using e-government systems. Teach learners about strong passwords, two-factor authentication, and safe browsing habits to mitigate potential risks.
6. Offer troubleshooting guidance: Anticipate common issues or challenges that learners might encounter when using e-government platforms. Provide troubleshooting guidance and solutions to help them overcome any obstacles they may face.
7. Provide resources and support: Share additional resources, such as user manuals, online tutorials, or FAQ documents, that learners can refer to after the training. Encourage them to seek further support or assistance if needed.
8. Foster a supportive learning environment: Create a safe and supportive learning environment where learners feel comfortable asking questions and seeking clarification. Encourage peer-to-peer learning and provide opportunities for learners to share their experiences and tips with each other.
9. Assess learning outcomes: Evaluate learners' understanding and proficiency with different e-government platforms through quizzes, assessments, or practical exercises. Use this feedback to identify areas for improvement and provide additional guidance if necessary.
10. Follow-up and reinforcement: Offer follow-up sessions or opportunities for learners to reinforce their skills and ask any remaining questions. Encourage them to continue using the platforms in their daily lives to solidify their understanding.

By following these steps, educators can effectively teach adults how to use e-government, empowering them to embrace the benefits it offers and navigate with confidence.

Besides, taking into account the above mentioned steps, let's have a look at some specific context-based activities educators can use for each domain of e-government.

1. E-literacy

Electronic literacy is about learning to use e-government and digital tools to better solve problems or perform everyday tasks using smartphones or computers where any citizen can access public services online, such as paying electricity bills, booking a doctor's appointment or paying a fine digitally without standing in line or wasting time.

The educator can introduce adult learners to the use of an e-government platform to perform small tasks and carry out dynamic activities using digital platforms in real-life context. The next table shows some examples of context-based activities for each area of e-government.

AREA	CONTEXT-BASED ACTIVITIES
E-government/ literacy	Creating your digital identity
	Request a birth certificate
	Request for a registration certificate
	Filing the income tax return

2. E-Health

E-health helps citizens facilitate some health services via the internet and other technology that would traditionally take time and take place in person at a health centre.

Providers and patients do not need to be present or in direct contact in person as they can interact through the platform to make appointments, view records or perform other simple tasks using technology via a computer or mobile phone, such as electronic health records (EHR), electronic prescriptions, telemedicine, telerehabilitation, consumer health informatics (CHI) and m-health: use of mobile devices, sensors, etc.

AREA	CONTEXT-BASED ACTIVITIES
E-health	Scheduling an online appointment
	Receiving telemedicine consultations
	Managing personal health records
	Have access to health information resources
	Remote monitoring while using sensors and wearables

Managing medication

Tracking progress through fitness and wellness apps

3. E-payment

E-payment refers to the process of making financial transactions electronically, typically using the internet or other electronic means. It involves the transfer of funds from one party to another without the need for physical currency or paper-based instruments such as checks.

Billing, in the context of e-payment, refers to the process of generating and delivering electronic invoices or bills to customers or clients.

Customers can then use various e-payment methods, such as credit cards, debit cards, online banking, mobile wallets, or digital payment platforms, to settle the invoices or bills electronically. E-payment systems securely process the payment information, authenticate the transaction, and transfer funds from the customer's account to the merchant's account.

When teaching adults how to use e-payment systems, educators can explain the benefits of these systems, provide step-by-step demonstrations of their usage: setting-up an account, navigating the interface and performing common tasks such as making payments, receiving funds, and reviewing transaction history.

AREA	CONTEXT-BASED ACTIVITIES
E-payment/billing	Introducing: Digital wallets (Paypal, Apple Pay, Google Pay, Samsung Pay); Credit Card and Domestic debit card; Online banking, Gift cards

4. E-leisure

E-leisure, also known as electronic leisure, refers to engaging in recreational or leisure activities through electronic means or digital platforms. It involves using technology, such as computers, smartphones, gaming consoles, or virtual reality devices, to participate in various forms of entertainment, relaxation, and leisure pursuits.

E-leisure has become very popular and is probably one of the most used areas despite the age of the users. While younger generations mainly use online games and social media, older adults are also active on streaming platforms (Netflix, Amazon Prime or YouTube), online reading and e-books, online music and podcasts, and social media, albeit to a lesser extent than young people.

In our course for adults, we have focused on the travelling part of leisure, in particular the benefits and risks of booking online, as well as some important platforms for booking and organising trips and other cultural and recreational activities online according to one's own interests and preferences.

AREA	CONTEXT-BASED ACTIVITY
	Carry out a search on the website of the town hall, and visit the Department of Culture for the events of the month.
E-leisure	Search for the best accommodation option and booking online through such platforms as: Hotels.com, Airbnb, Tripadvisor, Agoda, etc. Airline flights booking sites: airline company websites, OTAs and aggregators

5. E-participation.

E-participation, also known as electronic participation, refers to the use of digital technologies and online platforms to enable individuals and communities to participate in decision-making processes, governance, and public affairs. It involves leveraging technology to enhance citizen engagement, facilitate dialogue, and promote transparency in democratic processes.

E-participation aims to overcome traditional barriers to participation, such as geographic limitations, time constraints, and access to information. It enables a broader segment of the

population to actively contribute to discussions, policy formulation, and decision-making, regardless of their physical location or background.

Some examples of e-participation: online consultations, crowdsourcing, virtual town halls, online petitions and campaigns, digital feedback and surveys, e-voting and electronic decision making.

The educator can teach to use digital technologies and online platforms to empower the learners to become active citizens who contribute to shaping their societies.

AREA	CONTEXT-BASED ACTIVITIES
E-participation	Introducing the palette of one’s digital rights and ways to practice them Demonstration of available platforms and tools for e-participation Practicing with the platforms

6. E- education.

E-education, or online education, refers to the use of digital technologies and the internet to deliver educational content and facilitate learning experiences. It involves the use of online platforms, virtual classrooms, multimedia resources, and interactive tools to provide educational opportunities to students of all ages and backgrounds, regardless of their physical location. While it does not replace traditional education entirely, e-education complements it and has become an integral part of the modern learning landscape.

The educator can encourage adult learners in distance learning to practice the lessons learned through tasks and projects by working collaboratively with each other using tools and applications.

AREA	CONTEXT-BASED ACTIVITIES
E-education	Introducing some online learning platforms, such as: Domestika, Duolingo, Coursera Do some research using e-books, newspapers, articles, books

4. E-government areas and scenarios faced by adults

During the project lifetime, we have directly involved more than 120 adults and 70 adult educators from Italy, Cyprus, Greece, Spain, Germany and Portugal. We have focused our discussions and focus groups through an inductive approach, focusing on the different concrete behaviours and barriers faced by adults on a number of layers of participation, information, understanding and action regarding the possibilities around e-government utilities and tools made available by the public administrations.

Our approach has involved the opinions and the perceptions of adults and adult educators and in this way compose a nuanced concept of participation and digital education, where adult education can be a key to empower adults and engage them toward permanent learning patterns.

Based on the evidence gathered during the field research conducted by the DigEqual project, one can argue that while certain respondents view the utilisation of e-government tools as quicker, easier, and more convenient compared to the conventional system, the majority find it excessively complex to navigate. The level of difficulty primarily stems from a lack of digital literacy and lower educational attainment. Consequently, individuals with lower education levels encounter greater obstacles than those with higher degrees.

Numerous individuals experience a sense of incompetence when it comes to accessing digital services, particularly technological tools. Therefore, it is imperative that e-government services become more user-friendly and intuitive.

The engaged group of adults and adult educators stated that e-government tools are acknowledged for their utility in facilitating everyday procedures like bill payments, which traditionally involve lengthy queues at post offices. Consequently, there is a positive inclination towards digitization.

However, it is important to emphasise that these tools are not suitable for all age groups, particularly digital immigrants aged 45 and above, who are unable to fully leverage the potential of digital tools. Unfortunately, no measures have been implemented to bridge this generation gap, resulting in fear and a feeling of incompetence when it comes to independent use of digital tools.

The survey conducted among European citizens and educators reveals a noticeable disparity among the respondents. Approximately half of them demonstrate proficient utilisation of online services in their everyday routines, whereas the remaining half refrain from their usage due to either insufficient digital skills or a perception that online services are inferior to in-person alternatives. Such elements show how there is still a steep difference among adults due to the main digital divides rooted in social, economic, knowledge, and skills factors.

Our scenarios and research has mainly focused on six areas of discussion, such as:

- e-government literacy and knowledge of online administration

- e-payments and online bills (with all the elements of tax declaration)
- organisation of the free time via the usage of online platforms
- online health platforms checks
- online participation and activism
- online education opportunities and permanent learning

Per each area of investigation, we have detected a number of barriers faced by the adults which could be resumed as they follow:

- lack of trust and understanding of the logics of the platform
- lack of digital skills
- uncertainty about the economic tools available
- lack of support to use the services by the public administration (e.g. difficulties in using automatic chats)
- fear about the usage of own data (e.g. terms & conditions)
- among foreigners, language barriers and lack of full comprehension of the mechanisms

5. A checklist of key points to consider in context-based digital education for adult educators

From the point of view of educators, a critical reflection on digital education is crucial. According to the discussions and feedback received by educators, there is a widespread lack of integration and discussion of e-government by adult educators in their digital classes. In this sense, DigEqual is crucial as a complementary work for the digital education classes currently deployed by adult educators and adult organisations.

It is especially important to develop a unified approach on the educational work around e-government education.

In this sense, it is important to have some key points:

- clearly introduce each topic at the beginning of the digital education class
- browse around barriers, difficulties and current opinions of adults to map the current status
- reflect on their current scenarios and start building-up trust and reflection about those, especially when it comes to self-confidence and capacity-building
- deconstruct complex concepts by simple bricks of information

- “showing” how to do things - in other words, the educators must know the platforms and should be able to show to adult learners the advantages and the concrete outcomes of being able to use online platforms.
- Repeat the concepts and make sure that everyone understands them by proposing simple and real tests
- Make sure to work on things that are needed by the learners, so define an open channel with them, and adjust your lessons toward the needs which might emerge from time to time
- Give room for mistakes and laugh, and in this way people will see that they do not need to be rocket scientists to use available resources

6. In class activities

To support the work of adult educators, we have developed a set of prepared activities and tools that can be used by educators as a complementary toolbox in digital education. Especially, what we have developed has the aim to actively engage adults to reflect on their everyday issues and shape their conditions by breaking the perceived barriers.

In this sense, the developed activities have been set up with a similar working pattern:

1. Exploration and reflection pattern
2. Barriers reflection and strategy development
3. Get-to-know and get-to-do work
4. Call-to-action and behavioural change

To do so, adult educators have a double-fold set of tools:

1. In-class presentations as visual supports that facilitate the explanation and the in-class work by fixing main concepts and ‘visualise’ the activities
2. Non-formal activity tools, defined as a three-hour course (maximum) per each area of e-government, as a complementary ‘performing’ materials that adult educators can use and can be inspired from, rich in explanations and in detailed instructions for educators.

Plus, we have conceived a more theoretical part, which is a self-learning part, and that is the e-learning system conceived within DigEqual. Such a third element is both dedicated to adults and to adult educators, especially for those who are not familiar with the e-government tools or main elements.

In this sense, adult educators can also share with adult learners such a powerful tool that is an online repository where learning material and ready-to-be-done activities are available and can be accessed by anyone, and specifically by adult educators and adult learners involved in digital education classes.

Such materials can all be found in the results’ section and are downloadable in open and readjustable format.

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Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.



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