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AI4ALL
Desk Research

AI4ALL - Youth Solidarity Through Ethical Tech & Digital Inclusion

EducAI

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CHAPTER 01

Introduction

This desk research aims to analyse the main digital needs, barriers, and access gaps faced by young people, seniors, and migrants in Portugal, with particular attention to the communities of Mira and the Coimbra region.

As digital technologies play an increasingly important role in areas such as public services, education, employment, and social life, the ability to use online tools has become essential. However, not all members of society benefit equally from this digital transformation. Many citizens still face difficulties in using online platforms, accessing digital services, understanding artificial intelligence systems, and identifying trustworthy information.

By analysing national reports, official statistics, academic studies, and institutional publications, this study seeks to identify major issues related to digital exclusion, limited access to technology, low levels of digital competence, and the spread of misinformation. Special focus is given to groups that are more vulnerable to these barriers in their daily lives.

The findings of this desk research provide an evidence-based foundation for the AI4ALL project. By understanding the real needs of local communities, the project is better able to create relevant, inclusive, and effective activities that promote digital inclusion, ethical use of technology, and social solidarity.

> This research also supports the development of community-focused initiatives by identifying the main challenges faced by the local community in Mira, particularly those related to digital barriers and access to online services. It seeks to reduce digital inequalities and help participants use digital tools with confidence, awareness, and safety through targeted workshops and community actions.

CHAPTER 02

Methodology

This desk research was carried out through the review of existing public information, including national and European reports, official statistics, academic studies, institutional documents, and online resources related to digital inclusion and digital skills.

The study focused on collecting and reviewing data from trustworthy sources such as government institutions, European Union agencies, social organisations, and initiatives dedicated to digital literacy. Particular attention was given to materials addressing access to digital services, use of online platforms, media literacy, misinformation, and the use of artificial intelligence.

Furthermore, information from local and regional projects in the Coimbra region was analysed in order to better understand the specific realities of Mira and surrounding communities.

This methodology enabled the identification of relevant trends, key challenges, and existing gaps affecting young people, older adults, and migrants in relation to digitalisation and access to online services.

Alongside the analysis of secondary sources, this study also involved the collection of primary data through an online questionnaire addressed to young people, older adults, and migrants. The survey provided direct insights into participants' digital practices, challenges, needs, and experiences with online services and digital technologies.

> By combining desk research with primary data collection, this approach allowed for a deeper and more detailed understanding of the local context. The survey results, based on responses from the target groups, enhanced the credibility of the findings and offered a strong foundation for the planning, implementation, and evaluation of the AI4ALL project.

CHAPTER 03

National Context - Digital Inclusion in Portugal

Portugal has made important progress in its digital development, but significant challenges still exist in terms of digital inclusion and skills among different segments of the population. According to the latest Digital Decade progress reports, around 56% of the Portuguese population aged 16 to 74 has at least basic digital skills, a figure that is slightly above the EU average but still leaves nearly half of the adult population without these essential competencies.

Although digital skills have improved over time, significant differences remain, especially when considering age and educational background. In Portugal, younger generations tend to have stronger digital abilities compared to older adults, who often struggle with basic online activities. This gap between age groups reflects a wider European pattern, where older populations show lower levels of digital competence and make less frequent use of internet services.

Internet use in Portugal is widespread, with most people frequently using online platforms to communicate, search for information, and access digital services. Eurostat data indicate that over 88% of the Portuguese population uses the internet on a regular basis, reflecting high connectivity among most age groups.

However, some groups continue to face digital exclusion. For example, older citizens often experience difficulties not only in using digital technology but also in accessing essential online public services such as e-government forms or health records. Although digital public services have expanded in recent years, differences in digital skills and access still limit full participation for many citizens.

National strategies, including Portugal's Digital Decade action plan and the INCoDe.2030 programme, seek to reduce these inequalities by strengthening digital skills training and encouraging wider and more inclusive access to technology. Nevertheless, improving digital inclusion continues to be a major priority in public policy.

> In summary, while Portugal shows progress in digitalisation and internet use, persistent gaps in digital skills and unequal access to services underline the importance of targeted support and training, especially for vulnerable or under-served groups.

CHAPTER 04

Local Context - Mira & Coimbra

The local context of Mira and the wider Coimbra region shows a combination of rural and urban digital inclusion initiatives, along with specific challenges faced by different groups within the community. In the municipality of Mira, participation in the “Comunidade VirtuALL” project shows a clear commitment to enhancing active ageing and digital engagement among older adults by promoting the use of new technologies to improve quality of life and support social participation.

In the Coimbra area, several local initiatives aim to strengthen digital skills and support inclusion. For example, the DigiLife - Digital Life Learning project, coordinated by Cáritas Diocesana de Coimbra, focuses on improving digital literacy among older adults through intergenerational learning activities.

While such initiatives play an important role in promoting digital inclusion, their scope and target groups remain limited. This highlights the need for complementary community-based projects, such as AI4ALL, which aim to reach a wider range of participants, including youth and migrants, and address emerging challenges related to artificial intelligence and digital ethics.

The region also benefits from well-developed educational and technological infrastructure that can support digital inclusion more broadly. Coimbra is known for its strong higher education and innovation ecosystem, including institutions such as the Instituto Pedro Nunes, which promotes collaboration between universities, businesses, and technology initiatives. In addition, the TUMO Coimbra centre provides opportunities for young people to engage with creative and digital technologies. This helps increase access to advanced digital learning opportunities in the city.

> Overall, these local projects and institutions illustrate both the existing strengths and continuing needs in terms of digital inclusion in Mira and Coimbra. While there are programmes aimed at improving digital skills, particularly among older adults and young people, persistent barriers and unequal access to technology remain. This situation underlines the need for targeted, community-based initiatives, such as the AI4ALL project, to ensure that all members of the community can participate fully and confidently in the digital society.

CHAPTER 05

Needs & Barriers by Target Group

Youth

Young people in Portugal are generally active users of digital devices and online platforms, particularly social media. They regularly use smartphones, messaging apps, and online services on a daily basis for communication, education, entertainment, and social activities. However, being active online does not always mean having strong digital skills or critical understanding.

One of the main challenges faced by young people is the high exposure to false or misleading information, especially through social media. Short videos, emotional posts, and exaggerated headlines spread rapidly, making it difficult for young users to identify trustworthy sources.

The increasing use of artificial intelligence in online content also represents a new challenge. Many young people interact daily with AI-generated images, videos, texts, and recommendations without fully understanding how these systems operate. This can lead to confusion, overreliance on automated systems, and difficulties in recognising manipulated or inaccurate content.

Concerns related to privacy and data protection are also significant. Young people often share personal information online without being fully aware of how their data is collected, stored, and used by digital platforms. Limited knowledge of privacy settings and digital footprints increases their vulnerability to online risks.

Although young people often feel comfortable using technology, many still lack strong critical thinking skills in digital environments. This can limit their ability to analyse information, verify sources, and make well-informed online decisions.

> These needs and barriers underline the importance of providing targeted digital literacy programmes that support young people in developing media awareness, responsible use of technology, data protection skills, and critical thinking abilities.

CHAPTER 05

Needs & Barriers by Target Group

Seniors

Older adults in Portugal often experience significant difficulties when using digital technologies, especially smartphones and online platforms. While many seniors own mobile phones, they frequently use only basic functions such as phone calls or text messages and feel hesitant to explore more advanced features.

One of the main difficulties experienced by older adults is their vulnerability to online scams and fraudulent activities. Many receive suspicious messages, fake phone calls, or misleading emails and may not have the necessary skills to recognise these risks. As a result, they may face financial losses and emotional distress.

Using digital public services is another significant obstacle. Many essential services, such as healthcare appointments, tax platforms, and social security systems, are now primarily available online. For older adults with limited digital experience, these systems can be difficult to navigate, often leading them to depend on relatives or support staff for assistance.

Many older users are also afraid of making mistakes or damaging their devices. They may worry about "pressing the wrong button" and feel nervous when using digital tools. This fear often discourages them from practising and learning independently.

Furthermore, low self-confidence reduces their willingness to engage with technology. Previous negative experiences, limited access to training, and fast technological changes can strengthen feelings of insecurity and social exclusion.

> These barriers emphasise the need for patient, supportive, and practical digital training for older adults. Learning activities should aim to build confidence, promote safe smartphone use, improve access to e-services, and empower seniors to use technology independently in their daily lives.

CHAPTER 05

Needs & Barriers by Target Group

Migrants

Migrants living in Portugal often face several difficulties when trying to access and use digital technologies, especially when dealing with official platforms and online public services. One of the main barriers is language, as many digital systems and institutional portals are mainly available in Portuguese. This makes it harder for migrants to understand important information, fill in online forms, and communicate effectively with public authorities.

Another major challenge is the use of online public services. Many essential procedures, including residence permits, healthcare registration, tax declarations, and social security applications, are increasingly managed through digital platforms. For migrants with limited digital skills or unfamiliarity with these systems, completing these processes can be complex, confusing, and time-consuming.

Documentation and administrative procedures also create significant difficulties. Migrants are often required to submit documents online, complete digital applications, and organise electronic records. Difficulties in understanding instructions, using digital formats, or accessing reliable support may lead to delays, errors, or missed opportunities.

Migrants may also be more vulnerable to online scams and fraudulent practices, particularly when searching for employment, housing, or legal assistance. Fake job advertisements, misleading websites, and fraudulent messages may take advantage of language barriers and limited access to trustworthy sources of information.

Moreover, finding reliable and trustworthy information can be challenging. Many migrants depend on social media groups, informal community networks, or unverified websites, which increases the risk of receiving incorrect or misleading guidance.

> These needs and barriers demonstrate the importance of providing migrants with accessible digital education, multilingual support, and practical guidance on using online services safely. Training activities should focus on strengthening digital confidence, promoting awareness of online risks, and improving access to verified information and institutional support.

CHAPTER 06

Key Findings

This research identifies several common challenges affecting young people, older adults, and migrants in Mira, Coimbra, and Portugal as a whole, particularly in relation to digital inclusion and access to online services.

One of the main findings is that regular use of digital technologies does not necessarily mean high levels of digital literacy. Although many young people are active online, they often lack critical thinking skills and awareness of misinformation, artificial intelligence, and data protection. As a result, they are more exposed to misleading content and online risks.

In the case of older adults, the present research reveals significant difficulties in using smartphones, digital platforms, and electronic public services. Fear of making mistakes, low confidence, and limited access to learning opportunities continue to reduce their autonomy and engagement in digital environments. Many remain dependent on relatives or support services for essential online tasks.

Migrants face additional barriers related to language, access to information, and complex administrative procedures. Limited availability of multilingual digital services makes it difficult for many of them to complete important processes independently. This often leads to greater reliance on informal networks and exposes them to fraud and misinformation.

Across all target groups, the study identifies a strong need for accessible, practical, and community-based digital education. Lack of tailored training opportunities, insufficient awareness of online risks, and unequal access to support services contribute to persistent digital inequalities.

> Overall, the findings show that digital exclusion in the region is not only connected to access to technology, but also to levels of skills, confidence, and understanding. These challenges underline the importance of initiatives such as AI4ALL in encouraging ethical technology use, strengthening digital literacy, and promoting social inclusion.

CHAPTER 07

Implications for AI4ALL

The findings of this research provide important guidance for the planning and implementation of the AI4ALL project. By identifying the main needs and barriers faced by young people, older adults, and migrants, the project is able to develop targeted, relevant, and inclusive learning activities.

For young people, the findings highlight the need to strengthen critical thinking, media literacy, and understanding of artificial intelligence and data protection. In response, AI4ALL will focus on workshops that promote responsible use of social media, identification of misinformation, and ethical use of digital tools.

Regarding older adults, the research shows the importance of practical, supportive, and confidence-building training approaches. AI4ALL will therefore prioritise activities that encourage safe smartphone use, improve access to online public services, and increase protection against online scams through clear and step-by-step guidance.

For migrants, the findings point to the need for multilingual resources, simple explanations of digital procedures, and access to reliable information. AI4ALL will address these needs by creating inclusive materials and workshops that help participants navigate online services, understand administrative processes, and recognise online risks.

Across all target groups, the research confirms the value of accessible, community-based, and hands-on learning methods. AI4ALL will adopt non-formal education techniques, interactive tools, and participatory activities to ensure that learning is engaging, practical, and adapted to local needs.

> Overall, the implications of this research reinforce the relevance of the AI4ALL project in promoting digital inclusion, responsible use of technology, and social solidarity. By grounding its actions in evidence-based findings, AI4ALL enhances its ability to create meaningful and long-term impact within local communities.

CHAPTER 08

Conclusion

This desk research draws attention to the ongoing challenges related to digital inclusion, access to online services, and digital literacy among young people, older adults, and migrants in Mira, the Coimbra region, and Portugal as a whole. Despite progress in digitalisation, significant gaps remain in areas such as skills, confidence, access to reliable information, and safe use of digital technologies.

The findings demonstrate that digital exclusion is influenced not only by limited access to devices or internet connections, but also by a lack of critical awareness, training opportunities, and institutional support. These obstacles affect participation in education, employment, public services, and social life, increasing the risk of inequality and social marginalisation.

Within this context, the AI4ALL project plays a key role in addressing identified needs through inclusive, community-based, and practical learning activities. By encouraging ethical technology use, critical thinking, and digital self-confidence, the project contributes to empowering individuals and strengthening social cohesion.

This research offers a strong basis for the planning and delivery of AI4ALL activities. It ensures that project actions are informed by real community needs and adapted to local realities.

> Looking ahead, continued collaboration between young people, educators, community organisations, and public institutions will be essential to promote long-term digital inclusion. Future initiatives should build on the experiences gained through AI4ALL and continue investing in accessible and participatory digital education to ensure that no one is excluded from digital society.

CHAPTER 09

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