eINCLUSION

Digital Literacy & Competences

Background

Improving skills and competences is vital for Europe to remain economically competitive and socially inclusive. Equally, social participation in the information society increasingly requires new skills and competences.

For example, some 80 million Europeans have skills in low demand on the labour market. Reports suggest that by 2010 only 15% of newly created jobs will be for people with basic skills, whereas 50% will require highly skilled workers.

The European Union is equipping citizens with the skills needed to prosper by taking action focused on the following areas:

- Key competences
- Lifelong learning
- eLearning

What are Key Competences?

Irit, con ulput ip ex er alit, consequatem Key competences are the combination of skills, knowledge and attitudes supporting personal fulfilment, employment and active citizenship. People who develop key competences tend to be more informed, concerned and active members of society.

EU educational and training programmes support projects to help adults develop skills to adapt to an ever-evolving labour market.

Basic skills training online

The BSOLE project (Basic Skills Online in Europe) develops online training services for people with basic skills. After a successful launch in the UK, the project studied how to expand the service by offering it in multiple languages and tailoring it to regional needs. The measurable impact is educational resources will be greatly enhanced across the EU for people who need life-changing skills.

What is Lifelong Learning?

It is never too early or too late for learning. Gaining knowledge at any age enriches lives. It is also necessary for competitiveness and sustainable economic, social and cultural growth.

In the EU, 21% of employed people participated in some learning activity in 2003 compared to only 14% of the unemployed and 6% of the inactive population. Studies indicate people with the lowest key competences are less likely to seek training, making it difficult to help those who need it most.

Educational institutions can encourage lifelong learning by adapting their curricula to equip young people with specific skills to acquire knowledge throughout their lives. They can also introduce flexible ICT training solutions targeted at adult learners.

ICT changes the way educators teach, whether in the classroom or informal settings. As a result, teachers become facilitators of learning by increasing inclusion, organising teamwork and helping students direct their own learning. Engaging, interactive multimedia materials explain and present materials more clearly and effectively, helping to motivate students and increase collaborative work.

Businesses can play a role in fostering lifelong learning by evolving into so-called "learning organisations" that stress teamwork, flat hierarchies, multi-tasking and devolved responsibilities. Such dynamics encourage workers to actively gain new, higher-level skills as they take on more active roles.

Increasing competitiveness

The WELCOME project (Web-based E-Learning for SME and Craftsmen of Modern Europe) provides an e-learning website for craftsmen and small business employees to boost efficiency and competitiveness. The online classes include technical topics such as mechatronics and CNC machine programming.

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What is eLearning?

eLearning is the use of ICT to gain new skills and competences. It can especially benefit people who have limited access to education and training opportunities for social, economic, geographic and other reasons.

Adults can gain key competences by using eLearning. The flexibility of online learning lets them select how and when they gain new skills. In particular, they can increase their eSkills – the professional and personal skills needed to succeed in the Information Society.

People who increase their digital literacy are more likely to benefit from employment opportunities. ICT jobs in Europe currently account for 4% of total employment. This figure will grow as increased spending on R&D brings new products and services to global markets.

However, efforts need to be taken to foster the social inclusiveness of eLearning. The special needs of the disabled, older people and others should be incorporated into all eLearning. Focus should be given to how eLearning can increase the welfare of people living in rural and remote regions, as well as economically and technologically disadvantaged areas.

Opening new learning avenues

SEN-IST-NET addresses the risk that disabled or socially disadvantaged learners will not be fully involved in new ways of learning. The project develops networks of organisations to collaborate on innovative learning solutions meeting their special needs. New avenues for professional and personal enrichment will open up to these learners as a result of increased educational opportunities and experiences.

EU Efforts

The EU supports national, regional and local initiatives to transform education and training throughout Europe. Cooperation at European level will drive work towards setting common goals and sharing of best practices.

The EU encourages partnerships between the public and private sectors to achieve higher digital literacy rates in Europe. The EU's e-Skills Forum stimulates dialogue between stakeholders. In addition, the European Commission encourages private initiatives, such as e-Skills Certification Consortium (eSCC), to develop frameworks promoting the accreditation of certified training.

In particular, the EU promotes initiatives to increase learning and job opportunities for people regardless of ability, age, gender, ethnicity, educational achievement, financial and technological resources or other factors. These initiatives reach out to everyone no matter where they live in Europe, including rural, remote or economically disadvantaged regions.

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ICT for the Ageing Society

Background

Nearly 14% of the EU population is over the age of 65 and this figure is expected to double by 2050. By then, we will have 80 million older European citizens who should continue to play an active role in our society. Our elderly citizens should also be able to expect to maintain their independence for longer and longer, despite the limiting disabilities that the aging process often brings.

The EU works closely with stakeholders to find ways in which technology can support and enhance elderly citizen's lives in diverse areas, such as:

- Medical care
- Independent living
- Quality of life
- Assisted care
- Lifelong learning
- Career opportunities
- Participation in society

Thanks to research and development (R&D), ICT is being used to develop products and services that meet their needs, including ICT products and services. Key areas include:

- Assistive technologies
- Design for mainstream technologies
- Independent living
- Access to technologies and services

Care through televisions

The SAID project (Social Aid Interactive Developments) takes advantage of the estimated 50 million digital TV sets that will be in 30% of European homes by 2010 to deliver new services to the elderly. SAID allows video conferencing, alarms, surveillance, education, entertainment and personalised assistants for shopping and reminders. Older Europeans can now live longer at home with support from their TVs.

What is eAccessibility?

The goal of eAccessibilty is to increase the number and quality of ICT services benefiting people at risk of digital exclusion and to remove any related technological barriers, in particular for elderly people and those with disabilities. eAccessibilty has two main components: Design for All and assistive technology.

The principle of Design for All (DfA) is to create ICT products and services to meet the needs of users rather than requiring users to adapt so they can use them. DfA can play a major role in creating products and services to meet a wide range of users' needs: either with ICT itself or using ICT to develop other products and services. Studies show that almost half of Europeans aged 50 years or older feel their needs are not adequately met by current technology design.

Assistive technology helps people with disabilities, including many elderly people, to compensate for their impairments, restore some functions, thus enabling them to accomplish tasks more easily and live more independently. For example, people who have suffered a stroke, the leading cause of long-term disability in the EU, can use assistive technology to accelerate and improve their rehabilitation.

Understanding seniors' needs

SENIORWATCH studies how to improve technology products and services for older and disabled people by studying what their priorities and needs are. Companies and governments can use the findings to improve how they serve Europe's 40 million older people. As a result, older people will gain more benefits from ICT.

What is Ambient Assisted Living?

The use of ICT to help elderly people and people with disabilities to continue to live at home is referred to as independent living or Ambient Assisted Living (AAL). It can assist people in carrying out their daily activities and can also monitor health, facilitate social contacts and enhance safety.

The focus is on the integration of devices, systems and services into cost-effective, reliable and trusted solutions. On a practical level, this means older people will be able to choose to live independently when supported by technologies customised for them.

EU Efforts

The EU wants to empower older people to live independently and to continue to play an active role in society, despite limitations which the aging process may impose. It believes that this can be achieved by using technology in new ways to benefit older people.

Health care is one of the main concerns of an ageing society. Equipping national healthcare systems to respond to new demands is a priority. R&D projects are developing eHealth services that will improve the quality of care while keeping costs low and safety high.

The EU also supports initiatives to use ICT to offer learning opportunities to older people. Lifelong learning endorses the concept that "it is never too early or too late for learning". Gaining knowledge at any age enriches lives and improves job opportunities.

The EU is exploring new ways to support an older work-force. Currently, nearly 40% of the Europeans aged 55 to 64 years old are still active in the labour market. The Lisbon Agenda set the goal of increasing this number to 50% by 2010.

The European Union works closely with stake-holders to develop effective strategies to meet the needs of older people. It is especially interested in using technology to facilitate social inclusion, improve quality of life and enhance independent living.

Remote health monitoring

Healthservice24 permits medical professionals to assess and treat patients remotely, allowing patients to more fully participate in society since hospitalisation or lengthy doctor visits are no longer required. The system monitors their vital signs, wherever they are, using a mobile phone or PDA and vital sign sensors for blood pressure, pulse rate, ECG and other factors. As a result, older people can continue their normal activities knowing their health is being monitored around the clock.

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ICT & eAccessibility

Background

An inclusive society has products and services, including information and communication technologies (ICT), that are readily available to and easily used by a wide spectrum of people. ICT can empower all citizens to fully participate and contribute to the economy and society.

As a result, all Europeans will benefit from ICT innovations particularly people who are older, disabled or disadvantaged. ICT can help surmount or remove barriers that lead to social, economic and digital exclusion.

What is eAccessibility?

The goal of eAccessibility is to make ICT accessible to all, meeting a wide spectrum of people's needs, especially any special needs. ICT should be fully accessible for all and particularly for those at risk of social, economic or digital exclusion.

eAccessibility also seeks to make new technologies more affordable and useable to the general population. This includes older people and persons with difficulty using ICT due to disabilities. These are robust markets anxiously anticipating innovations to improve their quality of life and ability to live independently.

The eAccessibility initiative has two main components:
- Design for All
- Assistive Technologies

Design for All

The basic principle behind Design for All (DfA) is to create products and services to meet the needs of users rather than requiring users to adapt so they can use them. Its overall goal is to simplify people's lives. Other terms include accessible, barrier free and inclusive design.

According to studies, half of Europeans aged 50 or older say their needs are not adequately met by current technology design. ICT manufacturers can increase their market share by an estimated 10 to 12 million customers from this age group by incorporating DfA into product development.

In fact, DfA is for everyone since most users encounter some difficulties using products and services, especially with technology. A recent study revealed that products made with DfA principles increases usability among 60% of people between the ages of 21 and 62.

For example, studies show efforts to make websites accessible for users with special needs using guidelines developed according to the Web Accessibility Initiative (WAI) resulted in better access for all. Simple changes to increase usability result in huge improvements for everyone.

ICT designed for people

The DASDA project (Dissemination Activity Supporting Design-for-All) helps raise awareness among the European ICT industry and public procurers about the benefits of the Design for All (DfA) principles. It works with stakeholders to help ensure DfA is incorporated into research and technological projects so products and services meet the needs of a wide range of customers.

Widening the Electronic Highway

The WWAAC project (World-Wide Augmentative and Alternative Communication) is an initiative to make the electronic highway more accessible. As a result, an estimated 5.6 million people in the EU who have some type of language or cognitive impairment can access more Internet services and content.

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Assistive Technologies

Assistive technologies help people with disabilities or other limitations accomplish tasks more easily and increase their independence.

For example, such technologies could help someone who does not have full control of their arms or hands to use a computer, mobile phone and other day-to-day devices. They are then free to explore new career and personal networking opportunities.

Strokes are the leading cause of long-term disability in Europe. Assistive technologies can help stroke patients in their rehabilitation and to regain their independence. Such technologies also provide key support to family, friends and other caregivers.

Mobile phones for sign language

The WISDOM project (Wireless Information Services for Deaf People on the Move) gives deaf people the same ability to express information and emotions with mobile phones as everyone else. It uses enhanced video capabilities on 3G mobile phones to facilitate live visual conversations using sign language. If text messaging changed how the deaf community communicates, it is easy to imagine how this will revolutionise their lives.

EU Efforts

eAccessibility is a key concept in fostering growth and jobs in the information society. The EU eAccessibility policy is a comprehensive strategy for using legislation, public procurement and standardisation, complemented by research projects, pilots, and best practice exchange. The initiative seeks to promote social inclusion, offer better public services and increase quality of life.

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ICT & Cultural Diversity

Background

Information and communication technologies (ICT) play an increasingly important role in fostering social integration and cultural diversity. It can also increase mobility by helping people gain the language, interpersonal and other skills needed to live and work in a multicultural Europe.

These aspects of ICT are especially important to increase opportunities and social inclusion for Europe's immigrants, refugees and minorities. Barriers leading to social, economic and digital exclusion are particularly high in these groups. For example, lower levels of primary education and limited knowledge of the local language and culture can make it harder to access the labour market.

Achieving better integration requires a new approach, increased collaboration and greater resources. ICT, in cooperation with other efforts to eliminate or surmount these barriers, has the potential to greatly enhance their opportunities.

All Europeans can benefit, using ICT to deepen their knowledge of other cultures and, in particular, those of immigrants, refugees and minorities. This leads to a better understanding of their cultural richness and fosters mutual respect and collaboration. The Internet provides unlimited potential to share and celebrate cultural diversity with websites, online communities and blogs.
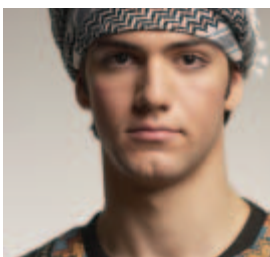
What role does ICT play?

Key competences are the combination of ICT services and tools tailored for immigrants, refugees and minorities to help them participate in and contribute to the economy and society.

Net migration in the EU-25 exceeds one million people per year. Increasingly, technology is making it easier for migrants to be active and involved in their new communities.

For example, interactive software programmes enable migrants to learn about their new home while using a computer, perhaps for the first time. Existing business-led initiatives in this field show that the skills they gain using these types of initiatives help them integrate better, enabling them to find or improve their employment, boost performances at school, and increase their participation in the wider community.

Refugee vocational training

The Interact Ireland pre-vocational training project prepares refugees for mainstream training by offering English language and basic information technology classes. Over 85% of its participants are either in full-time employment, mainstream training or are currently awaiting additional training. As a result, refugees have much better integration and employability in their new communities.

Roma gain new skills

The Decade of Roma Inclusion project is the first international effort to improve the living conditions of Europe's estimated 10 to 12 million Roma people. It complements eight central and eastern European countries' actions in areas such as education and employment. As a result of ICT training programmes, more Roma people will gain digital skills and develop additional competences.

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Assistive Technologies

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Digital Divide: ICT & Geographic Inclusion

Background

Information and communication technologies (ICT) can facilitate economic, cultural and social cohesion in Europe by fostering opportunities in:

- Rural areas
- Remote regions such as mountainous, island and outlying areas
- Economically disadvantaged regions.

For example, wireless Internet technology can dramatically improve opportunities available to people in rural or remote regions. Currently, these areas have seen fewer benefits from ICT in part due to a lack of Internet connections. DSL, Europe's most common broadband platform, reaches only 62% of homes in EU-15 (the so-called, old member states) rural areas compared to 90% in urban areas.

Employment and competitiveness improve as a result of communities' increased access to online services. Recent studies show that areas with broadband available from 1998 and 2002 experienced more rapid growth than areas with low bandwidth. Employment was higher and there were more businesses in these communities. New life will be injected into rural and remote areas as new opportunities are created as a result of increased Internet access and usage, helping to stop the flow of people and businesses out of these areas.

What is Geographic Inclusion?

Geographic inclusion exploits the potential of ICT to promote economic and social prosperity across the EU.

Initiatives seek to increase:

- Availability of broadband
  The reach of broadband can be increased through public-private partnerships that find new solutions to rollout broadband in rural, remote and less favoured regions. Wireless can go where burying cable connections would either be too costly, technically difficult or damage the environment

- Public Internet access points
  Public Internet access points are places such as libraries, community centres and cyber cafes that help people get on the electronic highway. They play a key role in making the Internet available to people in remote regions as well as in city neighbourhoods. Some administrations and organisations have made use of these access points to deliver training to help locals gain new digital skills to increase employability and inclusion.

Better training at sea

The SLIM-VRT project helps maritime workers, who are often at sea for long times, gain new skills and knowledge using its e-learning system. The highly customisable training is centred on maritime safety. The success of this project demonstrates how ICT can be used to deliver knowledge to learners no matter where they are – even if on the high seas.

Agri-food industry and ICT

The Ami@netfood project supports citizens and businesses in rural areas by identifying new ways to use ICT in the agricultural and food industries. Workers will benefit from technologies developed according to the project's strategic research agenda that identifies key R&D areas benefiting the sectors. As a result, ICT uptake and the competitiveness of rural areas, which account for 90% of the EU's territory, will increase.

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- Better public services using ICT
  Administrations can increase the quality and impact of public services through ICT. For example, the medical care of people living on islands can be improved when their hospitals are connected to larger ones where more specialised staff can remotely diagnose and treat patients. Such an approach can save lives as well as time and money.

- Training, skills and competences
  It is estimated that eLearning, the use of ICT to gain new skills and knowledge, is growing at a yearly rate of 30% in Europe – thanks in part to increased Internet availability in previously excluded regions. As a result, people living in impoverished inner-city neighbourhoods will benefit from training opportunities to develop key competences and interpersonal skills that lead to better jobs and quality of life.

EU Efforts

The European Union actively encourages the spread of broadband. Effective regulation of the telecommunications sector results in wider deployment of broadband. The EU works with Member States to improve communications infrastructure, for example through a project to develop broadband access in underserved Greek territories".

The EU is working to enhance training and educational opportunities available to citizens. Rural development projects to promote growth and employment, such as the Leader Community Initiative, help people develop key competences and technical skills. For example, projects in Scotland's Highlands and Andalusia have developed strategies to increase local ICT skills, thereby reducing the digital divide and improving job opportunities.

In addition, public services using ICT are being launched at a trans-European level to provide the critical mass and new technologies needed to deliver services to all regions of Europe. These initiatives increase cross-border cooperation, share good practices and improve efficiency and effectiveness.

Geographic inclusion is important to building a cohesive Europe. The European Union will continue to work with Member States to develop strategies to increase opportunities for citizens living rural, remote and economically disadvantaged regions.

Rural internet access

The Red.es Rural Public Access Centre project brings broadband Internet connections to rural and remote regions in Spain. In cooperation with county councils, these centres deliver training and other services to citizens. About 1.3 million people will benefit from new access to the Internet and higher digital literacy rates as a result of the project.

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Inclusive eGovernment

Background

Recent studies indicate that countries with the strongest economies also rank high on eGovernment readiness and public sector openness and efficiency. There is a strong link between the quality and inclusiveness of public administration and national competitiveness and innovation.

Information and communication technologies (ICT) are increasingly used to enhance public services by boosting their quality, efficiency and effectiveness. Inclusive governments use ICT to design public services that meet the needs of all citizens, such as older people.

For example, Finland, Sweden and Denmark have the highest number of people over the age of 55 using e-services. They have been able to achieve this by first understanding what the needs of older citizens are and then designing public services to meet these needs. ICT is the vehicle through which public services reach a wide range of older citizens, whether living in urban or rural areas.

What is Inclusive eGovernment?

Inclusive eGovernment is the use of ICT to provide public services that enrich citizens' lives, stimulate public participation in the community, strengthen democracy and reach out to people at risk of social, economic or digital exclusion. It is a 'mindset' that embraces ICT as a way of achieving more equitable, participative and cohesive communities.

Civic pride online

The INTELCITIES project involves citizens more closely in government decision-making. Anyone with Internet access, whether from a computer or mobile phone, can access information such as construction plans for a new building, air quality over a certain part of the city or the anticipated impact of a new road. As a result of greater inclusion and civic participation, Europeans will take a more active interest in the sustainable development of their communities.

There are two dimensions to achieving more inclusion through "eGovernment for All":

- Ensuring that public services are accessible to, and usable by everyone. This can be accomplished through designing services better, using many different ways to connect with citizens, enabling citizens' digital literacy and effectively promoting ICT services to increase uptake.
- Transforming the way administrations go about creating and implementing policies and services that deliver measurable benefits to all citizens. This approach uses ICT to pro-actively improve inclusion.

ICT should be used as a means of eliminating or overcoming barriers, rather than creating more. Governments can ensure inclusiveness by using eAccessibility standards to make sure all citizens' needs, including those who are older or have disabilities, are taken into consideration with e-services. In addition, multi-lingual services benefit a broader group of people, such as immigrants and minorities.

Inclusive eGovernment uses a "multi-channel" approach that takes advantage of a variety of technologies to reach citizens, such as the Internet, mobile phones, kiosks and digital television. Citizens on the go or in remote areas can use mobile electronic services (m-services) to connect to their governments.

Citizens should be empowered to use these services through formal and informal training in digital literacy and skills. In addition, administrative staff, from those in citizen service centres to political leaders, should have appropriate digital skills and be able to identify new ways to use technology to improve public services.

Web promotes participation

The eParticpate project enables citizens to be more active in government decision-making by letting them give feedback to the live proceedings of local council meetings broadcast via the web (called 'webcasting'). It increases inclusion by allowing people who had previously been excluded, such as the disabled or those in remote regions, to participate more fully. As a result, citizens will be more engaged in democratic renewal with live access to government proceedings.

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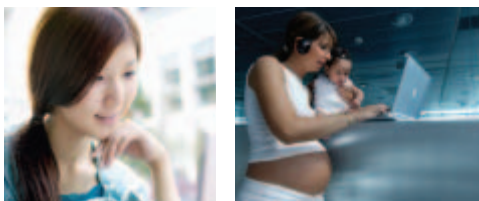
Citizens should be able to choose how they use public services: electronically, person-to-person or a combination. ICT should enhance citizen options rather than restricting them, while fitting their needs through customisation. Governments can encourage greater take up and use of e-services by stressing their benefits, such as savings in time and money.

Inclusive eGovernment is also about sparking increased public participation in society and government decision-making processes. It can create a renewal in the democratic spirit by helping citizens to be active and well informed as well as enable dialogue between citizens and administrations.

ICT can also be used to enhance government communication and dialogue with citizens, thereby increasing transparency and accountability. A recent online poll shows that 65% of respondents believe eGovernment initiatives can reduce democratic deficits.

Inclusive eGoverment is also important to enabling national and cross-border movement of people. In order to ensure that services are accessible to everyone, governments on a local, regional and national level should harmonize their services and applications. ICT can enhance citizen mobility services such as patient health records and pensions.

EU Efforts

The European Union seeks to ensure that all citizens have equal opportunities to participate in, and contribute to, the wider community and the economy. It works closely with Member States and stakeholders to develop public services to develop public services that are more accessible, especially for those at risk of digital, social or economic exclusion.

The European Union supports Member States in their commitment to Inclusive eGovernment objectives to ensure that by 2010 all citizens, including socially disadvantaged groups, become major beneficiaries of eGovernment. It supports their initiatives to deliver public information and services that are more easily accessible and increasingly trusted by the public.

The EU is active in initiating and supporting research projects, deployment pilots, Structural Fund support, policy studies and common specifications to address citizens' needs. It promotes cost-effective solutions for personalisation, user interaction and multi-lingualism in eGovernment.

The EU facilitates Inclusive eGovernment by providing a framework for the exchange and sharing of practical experiences and by providing focus on inclusive policies, multi-channel strategies and good practice solutions.

More Info

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