

European and International Policy Supporting ICT for Inclusion



**EUROPEAN AND INTERNATIONAL
POLICY SUPPORTING
ICT FOR INCLUSION**

European Agency for Development in Special Needs Education



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Edited by: Marcella Turner-Cmuchal, Agency Staff Member

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Secretariat
Østre Stationsvej 33
DK-5000 Odense C Denmark
Tel: +45 64 41 00 20
secretariat@european-agency.org

Brussels Office
3 Avenue Palmerston
BE-1000 Brussels Belgium
Tel: +32 2 280 33 59
brussels.office@european-agency.org

www.european-agency.org



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ABBREVIATIONS

- DAISY: Digital Accessible Information System
- DG: Directorate-General
- EPUB: Electronic Publication
- EU: European Union
- EU-SILC: European Union Statistics on Income and Living Conditions
- G3ict: Global Initiative for Inclusive ICTs
- HF: Human Factors
- ICT: Information and Communication Technology
- IBE: International Bureau of Education
- IDA: International Disability Alliance
- IDDC: International Disability and Development Consortium
- IITE: Institute for Information Technologies in Education
- ITU: International Telecommunication Union
- MDG(s): Millennium Development Goals
- MeAC: Measuring progress of eAccessibility in Europe
- OECD: Organisation for Economic Co-operation and Development
- R&D: Research and Development
- UN: United Nations
- UNCRPD: United Nations Convention on the Rights of Persons with Disabilities (2006)
- UN GAID: United Nations Global Alliance for Information and Communication Technologies
- UNESCO: United Nations Educational, Scientific and Cultural Organization
- US: United States
- W3C-WAI: World Wide Web Consortium – Web Accessibility Initiative
- WHO: World Health Organization
- WSIS: World Summit on the Information Society



INTRODUCTION

This review aims to present the developments in international and European policy related to Information Communication Technology (ICT) and education, with a special focus on ICT to support inclusive education. This review supports and accompanies the ICT for Inclusion project of the European Agency for Development in Special Needs Education – an update of the 1999–2001 Information and Communication Technology in Special Needs Education project (<http://www.european-agency.org/publications/ereports/information-and-communication-technology-ict-in-special-needs-education-sne/information-and-communication-technology-ict-in-special-needs-education-sne>).

In this review ‘inclusion’ is defined as:

an on-going process aimed at offering quality education for all while respecting diversity and the different needs and abilities, characteristics and learning expectations of the students and communities, eliminating all forms of discrimination (UNESCO-IBE, 2008, p. 3).

ICT has become a powerful tool, which enables a variety of people worldwide to participate in the Information Society. UNESCO defines and differentiates the Information Society from the Knowledge Societies as follows:

The notion of the information society is based on technological innovations giving new broad access to information, while the concept of knowledge societies encompasses much broader social, cultural, ethical and political dimensions. Knowledge is a key factor for a sustainable human development. Knowledge Societies also reflect universally accepted values of openness and public and equal participation enshrined in the Universal Declaration of Human Rights. Those values have progressively permeated the legal framework of a majority of countries around the world. They are particularly important as a background in relation to persons with disabilities, and their right to freedom of expression, access to information and education and to full participation in society (UNESCO, 2013a, p. 12).

The possibility of people participating in the Information and Knowledge Societies is dependent on the availability and affordability of ICTs and relevance of contents and services, but also on their accessibility: ‘users must be able to perceive, understand and act upon ICT interfaces’ (UNESCO, 2013a, p. 7).

Within today’s information society, learners with disabilities and special educational needs are among the groups most likely to encounter barriers to accessing and using ICTs and subsequently in benefiting and contributing to Knowledge Societies.

For the policy review, the term ‘people with disabilities’ will be used, which is to be understood within the terms of the UN Convention on the Rights of Persons with Disabilities (UNCRPD) 2006:

Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others (p. 5).

In addition the term ‘learners with disabilities and special educational needs’ will be used to stress the relevance of the issues highlighted in this review both for learners with disabilities as well as learners who may be vulnerable to exclusion from education



opportunities for other reasons, such as learning difficulties or the experience of social disadvantage.

European and international policy makers are striving to develop policies which address the issue of people with disabilities experiencing the digital divide – ‘the gap between those who can benefit from digital technology and those who cannot’ – due to the inaccessibility of ICTs (<http://www.digitaldivide.org/digital-divide/digitaldividedefined/digitaldivide.html> Accessed 15 April, 2013).

For this review, ‘policy’ is understood as:

rules, regulations, conventions and standards established by governments at the local, regional, national, and international levels, or by other recognized authorities. Policies govern and regulate the systems that organize, control and monitor services, structured programmes and operations in various sectors of society (WHO, 2001, p. 192).

This review is based upon a conceptual framework regarding the use of ICT to support people with disabilities that is underpinned by the UNCRPD statements and recommendations on access to ICT. Building on these statements, the European Agency for Development in Special Needs Education in co-operation with the UNESCO Institute for Information Technologies in Education (IITE) reviewed international practice in the use of ICTs in education for people with disabilities and identified five key principles within the UNCRPD to support this practice.

The developments within international and European policy from 2001 onwards have been considered following five principles identified in the publication *ICTs in Education for People with Disabilities* (UNESCO IITE and the European Agency for Development in Special Needs Education, 2011):

1. ICT should be considered as a key tool for promoting equity in educational opportunities;
2. Access to appropriate ICTs should be considered an entitlement;
3. Training of educational staff in the use of general and specialist ICT must be considered a priority area;
4. The promotion of ICT research and development requires a multi-stakeholder approach;
5. Data collection and monitoring in the use of ICT in inclusion should be considered an area requiring attention at all levels of educational provision.

Each of these themes provides the basis for separate chapters of this review.



METHODOLOGY

The methodology used for this policy review was to systematically search internet resources and databases. Searches were also made of relevant websites of the European Union, European Commission, Council of the European Union, UNESCO, the United Nations and the World Bank. European and international online reports as well as conference proceedings were taken into consideration. These general searches were followed up with more specific citation searches. Material was organised into the five review themes, identified by chapter headings.

The initial search terms included: access to ICT, accessible ICT in education, ICT and disability/special needs, assistive technologies in education, ICT and inclusion. The focus was on ICT for learners with disabilities, with particular focus on ICT as a tool to support and enable learning.

For this policy review not every European and international policy document could be considered. A selection was made to include policies between the years 2001–2013 and which were considered to touch upon issues which are relevant to providing access to education for learners with disabilities and special needs.

An overview of the European and international policy relevant to the key themes considered in this report is presented in the ICT for Inclusion policy matrix in Annex 1.

The European and international policies considered are fully referenced in Annex 2.

In addition to the policy documents, supporting documents such as working documents leading to policy developments and progress reports and surveys with regard to implementation of policies have been considered. These documents are referenced in Annex 3.



PROMOTING EQUITY IN EDUCATIONAL OPPORTUNITIES

The use of ICT to promote equity in educational opportunities is ‘the essential purpose of using ICT in education for people with disabilities – the use of ICT is not an end in itself; rather it is a means of supporting individual people’s learning opportunities’ (UNESCO IITE and the European Agency for Development in Special Needs Education, 2011, p. 138). The term ‘equity’ has purposefully been used instead of the phrase ‘equal opportunity’ – equity being more than equal opportunities. ‘Equity implies people’s individual needs being met in inclusive settings through differentiated approaches that take learner diversity into account.’ (UNESCO IITE and the European Agency for Development in Special Needs Education, 2011, p. 138). The Commission of the European Communities (2006) defines equity as being ‘... viewed as the extent to which individuals can take advantage of education and training, in terms of opportunities, access, treatment and outcomes’ (p. 2).

European Developments

In 1999, when the European Agency’s Information and Communication Technology in Special Needs Education project began, information on the use of ICT in the field of special needs education was limited to mostly national resources. Very little was available at a European level. Now it appears that the use of ICT permeates European policy papers published by the European Parliament, European Commission and Council within all areas of policy making, including education, economy, anti-discrimination and government. This demonstrates how ICT has developed and potentially impacts on all aspects of today’s society. European policy is being continuously updated and reviewed with policy documents, programmes, actions and standards being revised in an effort to keep pace with technical developments and in the hope of reducing the digital divide.

‘ICT to promote equity in educational opportunities’ is a recurring main principle identified through the analysis of international policy and practice in the report *ICTs in Education for People with Disabilities* (UNESCO IITE and the European Agency for Development in Special Needs Education, 2011).

Currently European policy (for example *Conclusions on Accessible Information Society* (2009), *Digital Agenda for Europe* (2010), *Post i-2010 Strategy* (2010)) stresses the importance of ICT and the ability to use ICT in all areas of life including education, employment, and cultural and social environment. Digital literacy is considered a key competence for social inclusion on a personal level and a key facilitator for ‘progress towards an open, green and competitive knowledge society’ on a European scale (European Commission, 2007).

On a national level most European countries have policy recommendations in regard to the use of ICT to promote equity in education (Eurydice, 2011).

From 2001 to 2012, European policy can be seen as an indicator of the effort made to include people with special needs and disability in the information society.

The first *Council Resolution on e-Learning* from 2001 suggests to ‘ensure access to ICTs for everyone’ (Council of the European Union, 2001, p. 1), without specifically mentioning people with special needs or disabilities in the resolution. Following the UNCRPD publication in 2006, equal opportunities receives more and more mentions within EU policy: for example, the *Communication New Skills for New Jobs* of 2008 stresses that ‘Irrespective of age, gender, socio-economic background, ethnicity or disability, all EU citizens should have the opportunity to acquire and develop the mix of knowledge, skills and aptitudes they need to succeed in the labour market’ (Commission of the European



Communities, 2008, p. 10) and proposes ‘an EU-wide approach and instruments to support Member States in the integration of ICT competences and digital literacy (e-skills) into core lifelong learning policies.’ (p. 20). The *Council Resolution on the Situation of Persons with Disabilities in the European Union* of the same year declares that:

Accessible built environments, transport and Information and Communication Technology (ICT), both in urban and rural areas, are crucial for the realisation of a society which provides genuine access to equal rights ... (Council of the European Union, 2008, p. 2).

A year later the Council concludes that:

... the scope of ICT policy will need to expand from enabling the information society towards maximising the way in which ICT contributes to the EU’s progress towards an open, green and competitive knowledge society (Council of the European Union, 2009a, p. 3).

Pillar IV of the *Digital Agenda*: Helping disabled people to access content includes a Memorandum of Understanding on Digital Access for Persons with disabilities (European Commission, 2010a). The Roadmap of the European Accessibility Act of 2012 suggests there is a need to ‘improve the inclusion and participation of persons with disabilities in the European society and economy’ and promotes the option to ‘provide legal leverage for accessibility and inclusive design in public procurement’ (p. 2).

The excerpts above demonstrate how European policy has developed from not specifically including people with disabilities or special needs to promoting the possibility of legal action to ensure the inclusion of these groups in all aspects of today’s society.

The policy paper closest to voicing the need for ICT to promote equity in education is the *Council Conclusions: Support of the implementation of the European Disability Strategy 2010–2020*, which calls for mainstreaming of the issue of disability within the Europe 2020 Strategy. In relation to education and ICT it specifically calls for the support of:

relevant initiatives aiming to ensure that persons with disabilities have access to quality education and training on an equal basis with others, so as to increase their knowledge, skills and qualifications in order to promote their mobility and employability ...

and the promotion of:

the exchange of good practices, including comparative studies, with regard to support and assistance for persons with disabilities, with a view to improving their access to the education system at all levels, including, for example, by using assistive technologies (Council of the European Union, 2011, p. 5).

International Developments

In recent years, one of the key policy documents for movements towards equity in education is the *Millennium Development Goals* (MDGs). The MDGs aim to achieve a certain number of targets by 2015. These targets include universal access to education as well as gender equality and reducing the number of people faced with extreme poverty by half. However, the MDGs fail to consider the needs of people with disabilities. The publication *UNESCO and Education. Everyone has the right to education* (UNESCO, 2011) also fails to mention people with disabilities and their challenges for equal opportunities in education. The fact this has been neglected in the MDGs has been



sharply criticised, for example in a joint statement by the International Disability Alliance (IDA) and International Disability and Development Consortium (IDDC):

Persons with disabilities were absent from the Millennium Declaration and have remained so throughout the Millennium Development Goals processes: According to the UN System Task Team report on the post-2015 agenda, the MDGs have not reached the poorest and most marginalized people. The exclusion and invisibility of persons with disabilities is indicative of how the present framework fails. This has been compounded by a lack of reliable statistics on persons with disabilities. They face discrimination on multiple levels, yet remain absent in the implementation, monitoring and evaluation of the MDGs (IDA and IDDC, 2012, p. 2).

The General Assembly of the United Nations also recognised within its resolution of 4 February 2011, *Realizing the Millennium Development Goals for persons with disabilities towards 2015 and beyond*, that it is:

Gravely concerned that persons with disabilities are often subject to multiple or aggravated forms of discrimination and are still largely invisible in the implementation, monitoring and evaluation of the Millennium Development Goals (United Nations, 2011, p. 1).

The World Summit on the Information Society (WSIS) recognised the need for people with disabilities to access ICT quite early in their work and the Actions outlined in both the Geneva (2003) and Tunis (2005) agenda can be seen as:

... the first global acknowledgement by United Nations Member States of the need to ensure that persons with disabilities can access ICTs in order to fully participate in society, have complete access to knowledge and services based on digital technologies, whether education, employment, e-government or leisure (UNESCO, 2013a, p. 7).

More specifically, in Section E of Action C2, 'Information and communication infrastructure' the WSIS Plan of Action (WSIS, 2003) encourages State Parties:

... in the context of national e-strategies, [to] address the special requirements of older people, persons with disabilities, children, especially marginalized children and other disadvantaged and vulnerable groups, including by appropriate educational administrative and legislative measures to ensure their full inclusion in the Information Society (WSIS, 2003, p. 3).

Another WSIS target of the Statistical Framework supports equity in education: 'Target 7. Adapt all primary and secondary school curricula to meet the challenges of the information society, taking into account national circumstances' (UNESCO, 2013a, p. 62).

These and other Actions as well as all of the preliminary work of the WSIS informed and was built upon by United Nations activities leading to the UN Convention on the Rights of Persons with Disabilities (2006), which became the first legally binding and enforceable instrument for State Parties to fulfil their obligations of providing accessible ICTs and access to information and knowledge.



The following elements and articles are specifically relevant for ensuring accessibility of ICTs and education:

Preamble	<i>the importance of accessibility to the physical, social, economic and cultural environment, to health and education and to information and communication, in enabling persons with disabilities to fully enjoy all human rights and fundamental freedoms is recognised.</i>
Article 4: General obligations	<i>adopt all appropriate legislative, administrative and other measures for the implementation of the rights recognized in the present Convention</i>
Article 9: Accessibility	<i>enable persons with disabilities to live independently and participate fully in all aspects of life, States Parties shall take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and to other facilities and services open or provided to the public, both in urban and in rural areas.</i>
Article 21: Freedom of expression and opinion, and access to information	<i>ensure that persons with disabilities can exercise the right to freedom of expression and opinion, including the freedom to seek, receive and impart information and ideas on an equal basis with others and through all forms of communication of their choice ...</i>
Article 24: Education	<i>Persons with disabilities can access an inclusive, quality and free primary education and secondary education on an equal basis with others in the communities in which they live and are able to access general tertiary education, vocational training, adult education and lifelong learning without discrimination and on an equal basis with others.</i>
Article 26: Habilitation and rehabilitations and Article 29. Participation in political and public life	Both articles refer to the availability of assistive devices and technology.

The UNCRPD aimed at addressing a neglected human rights challenge – people with disabilities, who make up about 15% of the world’s population (WHO/World Bank, 2011). The UNCRPD is a driving force when it comes to equity in education, which is specifically highlighted in Article 24. which argues for the right to education ‘without discrimination and on the basis of equal opportunity’ for persons with disabilities. Currently the Convention has 130 ratifications and 155 signatories. The Optional Protocol has 76 ratifications and 91 signatories (Data as of April, 2013). The ratification of the UNCRPD makes it a legally binding document for the respective country.



A critical survey of progress on the UNCRPD was published by the Zero Project, which surveyed UNCRPD signatory countries with regard to their implementation of the UNCRPD. National data was collected in three areas: social indicators, innovative practice and innovative policy. Results relating to Article 24. on Education show that:

in just over half (28) of the countries surveyed, a right to such [inclusive] education does exist, whilst in 22 other countries, only children with certain difficulties have a right and others must attend special schools. The existence of this right, however, as so often, does not mean that such education exists in reality ... (Fembek et al, 2012, p. 72).

In 2013 UNESCO published a progress report on the UNCRPD and ICT accessibility. Within this report a number of recommendations were listed to promote equity in education through the use of accessible ICTs:

- *Promoting accessible and assistive information and communication technologies in support of Inclusive Education;*
- *Governments should ensure that accessible contents and services and assistive technologies are made available to students with disabilities throughout their education system and that teachers are trained and supported in their implementation;*
- *UNESCO, in cooperation with relevant institutions, should develop a model policy for national education institutions to promote accessible and assistive technologies in support of Inclusive Education;*
- *Such a model policy should include procurement criteria based upon standards including but not limited to the DAISY/ePUB3 and W3C-WAI guidelines as an incentive for publishers, information services, web services and hardware vendors to develop accessible education tools and contents;*
- *UNESCO, in cooperation with education institutions, should research and document how technology can assist students with disabilities in excelling in inquiry based learning and becoming proficient in participating in all aspects of Knowledge Societies (UNESCO, 2013a, pp. 86–87).*



ACCESS TO APPROPRIATE ICTS

European Developments

The entitlement to appropriate and accessible ICTs is written into various EU policy documents. The *Digital Agenda* (2010) – one of the seven flagships of the Europe 2020 Strategy – stresses under Pillar VI: Enhancing digital literacy, skills and inclusion: ‘The digital era should be about empowerment and emancipation; background or skills should not be a barrier to accessing this potential’ (p. 24).

Six months before the UNCRPD was adopted in the UN Headquarters in 2006, Ministers of the EU Member States agreed a Ministerial Declaration on ICT for an Inclusive Society. In this declaration the Ministers agreed, as one of seven priorities, to:

... enhance eAccessibility and usability by ... facilitating accessibility and usability of ICT products and services for all, with a special focus on people with disabilities, such that this will benefit everyone. This should be achieved by accessible digital content on all platforms, interoperable assistive technologies, and mainstreaming inclusive design and design for all in the development of ICT products and services (Ministers of European Union, 2006, p. 3).

The *Council Conclusions on Accessible Information Society* suggests that all stakeholders ‘improve the availability, interoperability, affordability and awareness of accessible ICT solutions, following as close as possible a “design for all” approach ...’ (Council of the European Union, 2009b, p. 4).

On 26 November 2009, the Council of the European Union approved the UNCRPD on behalf of the European Community, committing to the general principles and obligations of this document. The majority of European Union Member States have also signed and ratified the Convention as well as the Optional Protocol (Source: <http://www.un.org/disabilities/documents/maps/enablemap.jpg> Accessed 15 April 2013). European policies written after the European Union approval of the UNCRPD in 2009 often cite the articles and definitions found within the UNCRPD, especially in relation to accessibility and disability.

In addition to the EU and Member States’ ratification of the UNCRPD with its clear obligation to implement improved accessibility (European Commission, DG Justice, 2011), one additional development is driving the entitlement to accessible ICT and additional ‘goods’ on the European market: Europe’s ageing population, which is increasingly in need of accessible products.

These developments lead to the elderly as well as people with disabilities being the key target group in need of accessible ICT, which raises the potential market for such solutions. The European Union Statistics on Income and Living Conditions (EU-SILC) data from 2006–2008 shows a correlation between disability and age (Applica & CESEP & Alphametrics, 2007), which supports this assumption. This mixed target group for accessible solutions is also in line with the Synergy Principle presented in *Promoting Accessible Information for Lifelong Learning*: ‘Accessibility benefits users with disabilities and/or special educational needs and may often benefit all users’ (European Agency, 2012). Newer policies reflect the enlargement of the group of people benefiting from accessibility and in some instances speak more generally of social cohesion or inclusive economies.

In contradiction to this, Action 65 ‘Helping disabled people access content’ of the Digital Agenda which planned a more holistic Memorandum of *Understanding on digital access*



for people with disabilities is considered completed with the signing of a Memorandum of Understanding on access to works for dyslexic or visually impaired readers (2010), which is limited to describing necessary actions only for a specific group of people in need of accessibility of ICT and content. Also in the 2012 update of *The Digital Agenda for Europe*, the terms 'disability' and 'accessibility' are no longer mentioned (European Commission, 2012).

The Europe 2020 Strategy also no longer mentions people with disability or accessibility beyond the Digital Agenda flagship. In this document 'inclusive' is only mentioned in tandem with economy and growth and defined as 'fostering a high-employment economy delivering economic, social and territorial cohesion' (European Commission, 2010b, p. 10). The term 'access' is used only in connection to economic issues such as funding and availability of broadband and less to accessibility as defined by the UNCRPD.

In relation to the European Accessibility Act, the consultation document (European Commission, DG Justice, 2011) and roadmap (European Commission, 2011) uphold the terms 'accessibility' and 'access to' as defined in the UNCRPD. The European Accessibility Act was planned for publication in 2012, but this has been postponed and it was not yet published at the time of this policy review. The roadmap stresses that 'accessibility is at the heart of the (European) strategy' and aims to address that 'there are not enough accessible goods and services on the EU market ...' leading to significant 'barriers for disabled people's economic, social and political participation in society' (p. 1). The key evidence given to support this recognised entitlement is of an economic nature. The 'weak enforcement mechanisms of the existing regulations' (p. 2) seem to cause the under-development of the accessibility market and legislative options are recommended in order to avoid 'limited access to education and work resulting in many cases in poverty' (p. 3).

The current drafts to the update of Mandate 376, including the document *Human Factors (HF): European accessibility requirements for public procurement of ICT products and services*, specifying the functional accessibility requirements applicable to ICT products and services, were submitted for approval in December 2012. If approved in its current form, this document holds extensive and detailed information on accessibility of ICT products and services and will be the basis for a procurement toolkit planned for 2014.

International Developments

Within European policy the use of the term 'accessibility' varies throughout policy sectors as well as across different time periods. Within international policy this term is used more consistently – mainly in line with Article 9 of the UNCRPD, which requires that appropriate measures be taken:

to ensure to persons with disabilities access, on an equal basis with others, ... to information and communications, including information and communications technologies and systems (United Nations, 2006, Article 9).

In 2013 the *WSIS+10 Review and Strategic Directions for Building Inclusive Knowledge Societies for Persons with Disabilities* states that for ICT to be accessible, people with disabilities need to be able to 'perceive output information, understand it and act upon it' (UNESCO, 2013a, p. 44). It further describes that:

In practice, accessibility is about the experiences of people with disabilities in trying to carry out the tasks for which the product is designed. The more people who can use the product, the more tasks they can carry out with it, and the easier it is for them to carry out those tasks, the more accessible the product is.



In essence, a product or service is accessible to the extent that its design caters for the needs of people with disabilities. (p. 43)

As early as 2003, Section F of Action C2, 'Information and communication infrastructure: an essential foundation for the Information Society', in the WSIS Plan of Action encourages:

... the design and production of ICT equipment and services so that everyone has easy and affordable access to them including older people, persons with disabilities, children, especially marginalized children, and other disadvantaged and vulnerable groups, and promote the development of technologies, applications, and content suited to their needs, guided by the Universal Design Principle and further enhanced by the use of assistive technologies (WSIS, 2003, p. 3).

The Tunis Commitment of 2005 was the first time in which it was stressed that the needs of persons with disabilities should be taken in account to achieve the MDGs:

We reaffirm our commitment to providing equitable access to information and knowledge for all, recognizing the role of ICTs for economic growth and development. We are committed to working towards achieving the indicative targets, set out in the Geneva Plan of Action, that serve as global references for improving connectivity and universal, ubiquitous, equitable, non-discriminatory and affordable access to, and use of, ICTs, considering different national circumstances, to be achieved by 2015, and to using ICTs, as a tool to achieve the internationally agreed development goals and objectives, including the Millennium Development Goals (WSIS, 2005, p. 13).

In 2012 a positive outlook was given:

With the further implementation of the many articles of the UNCRPD with specific accessibility requirements, the principle of equal access will become ever more important as an increasing number of ICT applications deliver essential services in domains such as Access to Information (Article 21), Inclusive Education (Article 24) or voting procedures via electronic kiosks (Article 29) (G3ict, 2012, p. 5).

However, a more critical review shows:

... that policies, programs and the implementation of solutions to facilitate the access to information and knowledge for persons with disabilities are severely lagging compared to the substantial and rapid progress made in increasing the coverage of the information and knowledge infrastructure. Such gaps affect all areas of application and services in education, e-government, e-health, access to media, to the Internet and to basic communications services (UNESCO, 2013a, p. 8).



TRAINING OF EDUCATIONAL STAFF

European Developments

Only very few European policies touch upon the training of educational staff in the use of general and specialist ICT. Nevertheless:

All European countries have national strategies in place to foster the use of ICT in different areas including a specific strategy devoted to education. In many cases, these strategies aim to provide the necessary ICT skills to pupils (in particular literacy skills) as well as provide ICT training for teachers (Eurydice, 2011, p. 9).

The *Council Resolution on e-Learning* (Council of the European Union, 2001) invites the Member States to:

continue their efforts in the initial and in-service training of teachers and trainers in the pedagogical use of ICT, given the need to develop the digital culture as one essential element in the teacher's basic skills and to motivate teachers and trainers to make the best pedagogical use of ICT in their own teaching (p. 1).

However, no specific reference is made to specialist ICT relevant for learners with disabilities or special educational needs.

A Commission staff working document on the European Disability Strategy 2010–2020 cited a EU-SILC publication which stated that:

awareness-raising to increase social acceptance of persons with disabilities and specific training for teachers on accommodating the persons with disabilities in classroom were seen as useful or very useful by respectively 87% and 86% of respondents (European Commission, 2010c, p. 44).

A *Digital Agenda for Europe* (European Commission, 2010a) recognises that 'There is also need for concerted actions to make sure that new electronic content is also fully available to persons with disabilities' (p. 26) and under the action area 'Inclusive digital services' suggests that Member States 'mainstream eLearning in national policies for the modernisation of education and training, including in curricula, assessment of learning outcomes and the professional development of teachers and trainers' (p. 27). To support this aim, the Commission agrees to:

develop in 2011 an online consumer education tool on new media technologies (e.g. consumer rights on the internet, eCommerce, data protection, media literacy, social networks etc.). This tool will provide customised information and education materials for consumers, teachers and other multipliers in the 27 Member States (pp. 26–27).

The 2011 Eurydice report *Key Data on Learning and Innovation through ICT at School in Europe* recognises in its main findings that:

- Information and Communication Technologies are part of everyday life and underpin children's education;
- National policies for ICT in education exist in all European countries and usually cover the complete learning process;
- There is no great disparity between schools in availability of ICT equipment but there is a lack of educational software and support staff;



- ICT is widely promoted by central authorities as a tool for teaching and learning but large implementation gaps remain;
- Teachers usually acquire ICT teaching skills in initial training but further professional development is less common.

International Developments

Both the UNCRPD and the WSIS (Tokyo Declaration, 2003; Tunis Commitment, 2005; San Salvador Commitment, 2008) recognise the need to prepare and train teaching staff to use ICT to support learning.

The UNCRPD specifically calls for:

States Parties shall take appropriate measures to employ teachers, including teachers with disabilities, who are qualified in sign language and/or Braille, and to train professionals and staff who work at all levels of education. Such training shall incorporate disability awareness and the use of appropriate augmentative and alternative modes, means and formats of communication, educational techniques and materials to support persons with disabilities (Article 24).

Additional reports acknowledge that the focus on access to ICT in learning sometimes fails to consider the necessity of training teachers to use technology to facilitate learning effectively. UNESCO in *The Future of Mobile Learning* quotes Valiente (2010) that 'for this reason many of these programmes have failed to have a positive impact on education', highlighting the fact that 'although access is important, it is not sufficient' (UNESCO, 2013b, p. 12).

The *UNESCO Global Report* extends the need for training to include other educators such as support staff or librarians, with the critical success factor being the ability of all educators:

... to utilize ICTs to engage effectively with people having a wide range of disabilities, assuming they have been able to recognize that the disabilities require particular educational interventions ... (UNESCO, 2013c, p. 26).

A report of the International Telecommunication Union (ITU) recognises how technology can also serve to:

support teachers by increasing their efficiency in and outside the classroom; help teachers respond better to students' individual needs; and facilitate communication between teachers, students, parents and administrators (ITU and UNESCO, 2013, p. 18).

UNESCO also strives to harmonise and update policies written at different times. Therefore a recent progress report calls for the wide promotion of:

the conclusions of its report on Accessible ICTs and Personalized Learning for Students with Disabilities and to incorporate an Inclusive Education component in its ICT Competency Framework for Teachers (UNESCO, 2013a, pp. 86–87).

An OECD comparative study criticises the lack of a systemic approach to technology-based school innovations as 'education systems keep investing in technology, based on the belief that, sooner or later, schools and teachers will adopt it and benefit from it' (2010, p. 13). The same study shows that:

... how technology is used in teacher training colleges reveals that in most cases these crucial institutions are unable to provide prospective teachers with



real hands-on experience in technology-enhanced pedagogies and, consequently, fail to provide clear directions on effective uses of technology in the classroom. Instead of being real showcasing opportunities, teacher training institutions seem to instil a reluctant attitude towards technology – presented as an add-on which would require more time (p. 16).

These references are to teacher training in general without any specific reference to inclusive teaching. However, the ITU and UNESCO reports mentioned above show how this is equally relevant to learners with disabilities.

ITU summarises both the involvement and the benefit for different stakeholders at different levels in the education system:

In addition to providing learners with the technological experience necessary to participate in the global economy, the use of technology in education can also improve the quality of teaching and learning. At the administrative level, technology can make education systems more efficient by helping teachers and administrators streamline routine tasks and improve assessment and data collection. In the classroom, technology can be a powerful catalyst for pedagogical change, as students use technology to take a more active role in personalizing their own education, and teachers take on new roles as facilitators of knowledge rather than knowledge transmitters (ITU and UNESCO, 2013, p. 9).



PROMOTION OF ICT RESEARCH AND DEVELOPMENT

European Developments

The promotion of ICT research and development is supported throughout EU policy.

The *Council Resolutions on e-Learning* (Council of the European Union, 2001) make the following suggestions:

... to enhance research in e-Learning, in particular on how to improve learning performance through ICT, pedagogical development, implications of ICT-based teaching and learning and to stimulate international cooperation in this regard;

and

... to promote partnership between the public and private sectors as a contribution to the development of e-Learning in order to encourage exchange of experiences, the dialogue on future requirements for multimedia learning materials; and technology transfer (p. 4).

The Riga Declaration (Ministers of European Union, 2006) called for:

... facilitating accessibility and usability of ICT products and services for all, with a special focus on people with disabilities, such that this will benefit everyone. This should be achieved by accessible digital content on all platforms, interoperable assistive technologies, and mainstreaming inclusive design and design for all in the development of ICT products and services. Research, professional training, centres and networks of excellence, user involvement, labelling, conformity assessment, and other means are key (p. 3).

The 7th Framework Programme of the European Commission, which provided financial support for projects in this area, reinforced this.

A more critical tone can be found in the *Digital Agenda for Europe* (European Commission, 2010a) and accompanying documents, which criticise the fact that:

Europe continues to under-invest in ICT related research and development. Compared to major trading partners such as the US, R&D in ICT in Europe is not only a much smaller proportion of total R&D spend (17% compared to 29%, but in absolute terms represents around 40% of US expenditure (p. 22).

In addition:

Europe continues to under-invest, fragment its efforts, under-use the creativity of SMEs and fail to convert the intellectual advantage of research into the competitive advantage of market-based innovations (p. 7).

In 2010 the European Commission presented a comprehensive research and innovation strategy, the 'Innovation Union' flagship to implement Europe 2020. The announced aim of this flagship is to foster innovative research, as:

Building on the European strategy for leadership in ICT, Europe must step up, focus and pool its investments to keep its competitive edge in this field and continue to invest in high-risk research, including multi-disciplinary fundamental research. ... The Commission will reinforce the activities bringing together stakeholders around common research agendas in areas such as the Future Internet including the Internet of Things and in key enabling technologies in ICT (European Commission, 2010a, p. 24).



However, the Innovation Union does not refer to ICT supporting learners with disabilities and special educational needs and ‘key enabling technologies’ are understood in an economic sense – as technologies that support economic growth.

International Developments

The first milestones for assuring access to ICT in education were laid down by the WSIS Plan of Action. This Plan of Action aimed to:

... advance the achievement of the internationally-agreed development goals, including those in the Millennium Declaration, the Monterrey Consensus and the Johannesburg Declaration and Plan of Implementation, by promoting the use of ICT-based products, networks, services and applications, and to help countries overcome the digital divide (WSIS, 2003, p. 1).

In Action C3, ‘Access to Information and Knowledge’, WSIS also recognises the need to:

Promote research and development to facilitate accessibility of ICTs for all, including disadvantaged, marginalized and vulnerable groups.

and

Encourage research and promote awareness among all stakeholders of the possibilities offered by different software models, and the means of their creation, including proprietary, open-source and free software, in order to increase competition, freedom of choice and affordability, and to enable all stakeholders to evaluate which solution best meets their requirements (WSIS 2003, p. 4).

The UNCRPD, building on the WSIS, also calls for State Parties to:

Promote the design, development, production and distribution of accessible information and communications technologies and systems at an early stage, so that these technologies and systems become accessible at minimum cost (Article 9).

and

Undertake or promote research and development of universally designed goods, services, equipment and facilities, as defined in article 2 of the present Convention, which should require the minimum possible adaptation and the least cost to meet the specific needs of a person with disabilities, to promote their availability and use, and to promote universal design in the development of standards and guidelines (Article 4).

The Strategic Plan of UNESCO’s *Information for All Programme* (2008–2013) also promotes the development of accessible digital resources for people with disabilities. (UNESCO, 2009b)



DATA COLLECTION AND MONITORING

European Developments

The *Council Resolutions on e-Learning* (Council of the European Union, 2001) suggest:

... to monitor and analyse the process of integration and use of ICT in teaching, training and learning, to provide existing quantitative and qualitative information, and to develop improved observation and evaluation methods, in order to share experiences and to exchange good practices with a view to contributing to the follow-up to the Report on the concrete future objectives of education and training systems (p. 4).

In 2008 the report *MeAC – Measuring Progress of eAccessibility in Europe* was published, including benchmarking data on accessibility of telephony, television, internet, computing and self-service terminals. The European Commission funded this report and the preliminary report of 2007. The reports showed that there is an ‘eAccessibility gap’, as:

People with Disabilities in Europe continue to be confronted with many barriers to usage of the everyday ICT products and services that are now essential elements of social and economic life (Cullen, 2008, p. 4).

Unfortunately, this report has not been updated or extended to include additional data on the accessibility of ICT and its relevance for inclusive education since 2008.

The *Digital Agenda Scoreboard* raises hope of the use of ICT to support inclusion being monitored, as the aim is to make progress within the digital agenda visible. Under Pillar VI: Enhancing digital literacy, skills and inclusion, data was collected to show that ‘the main barriers to going online are lack of interest, lack of skills and equipment and access costs’ (<http://ec.europa.eu/digital-agenda/en/pillar-vi-enhancing-digital-literacy-skills-and-inclusion/action-63-evaluate-accessibility>). Two percent of respondents are noted to have not accessed the internet due to disability – a number which has not visibly changed in the past three years. There are no other mentions of disability and inclusion of people with disabilities in the Digital Scoreboard 2012. Inclusion is considered more under the aspect of young people being included amongst their peers through the use of ICT and the Internet.

The publication of the European Accessibility Act (also under Pillar VI of the Digital Agenda) has been postponed until 2013. If, as suggested in the roadmap, a legislative and binding option is chosen, it is to be expected that more mechanisms for monitoring will follow.

At the moment it appears that data collection and monitoring is less an effort to portray the actual issue of ICT’s use in education, especially by learners with disabilities, but to show the economic perspective – good value for the given investment.

The *Council Conclusions on the Social Dimension of Education and Training* (Council of the European Union, 2010b) rightly considers that:

... given increased pressure on financial resources for education, it will be crucial to achieve enhanced effectiveness for public investment; analysis of the design and impact of different funding systems can help to inform choices (p. 4).

In addition, the Conclusions:



... support comparative research on the effectiveness of policies to increase equity in education and training, widen the knowledge base in cooperation with other international organisations and ensure a broad dissemination of research results (p. 9).

International Developments

The UNCRPD calls for State Parties to:

... undertake to collect appropriate information, including statistical and research data, to enable them to formulate and implement policies to give effect to the present Convention (Article 31: Statistics and Data Collection).

and

... in accordance with their legal and administrative systems, maintain, strengthen, designate or establish within the State Party, a framework, including one or more independent mechanisms, as appropriate, to promote, protect and monitor implementation of the present Convention (Article 33: National Implementation and Monitoring).

In addition, the UNCRPD requires the Conference of State Parties and the Committee on the Rights of Persons with Disabilities to monitor implementation within signatory States.

The UNCRPD ICT Accessibility Progress Report (G3ict, 2012) underlines the need for these monitoring structures, as:

... knowing how much progress is actually accomplished by countries around the world is an essential step for all stakeholders in order to address gaps and opportunities in their own countries (p. 1).

The second edition of the ICT Accessibility Progress Report collected data from 52 countries which have ratified the UNCRPD, offering:

... disability advocates, governments, civil society and international organizations monitoring the progress of the implementation of the UNCRPD by States Parties a unique benchmarking tool that collects data on country laws, policies, and programs pertaining to accessible and assistive ICTs around the globe (p. 1).

Three data clusters were considered:

1. Country legal, regulatory and programmatic commitments
2. Country capacity to implement
3. Country actual results for people with disabilities.

Sixty-seven percent of the countries report that their general and regulatory framework is in line with the UNCRPD ICT accessibility requirements, 32% claim to have the capacity for implementation and only 45% show actual implementation or impact within their countries.

The results also show that where multiple actors are involved to realise accessible ICT, the perceived responsibility of the public and private sectors varies across issues. Their results suggest that 'because the mix of responsibilities varies considerably by application sector, policies should be sector specific rather than generic' (p. 6). The involvement of both public and private sector is a critical success factor in defining policies and



programmes. However, few governments have the network to involve accessibility experts and disability organisations in their work.

G3ict, an advocacy initiative of the United Nations Global Alliance for ICT and Development (UN GAID), published an *ICT Accessibility Self-Assessment Framework*. This states that:

The overall purpose of the Framework is to help countries and their citizens look across all components and facets of their States' public (and private) operations in an effort to ascertain 'compliance' with the ICT mandates of the UNCRPD (G3ict, 2009, p. 3).

Investigations and surveys on the progress of implementation of the UNCRPD are also taking place independently. One example is the Zero Project Report 2013. With regard to data collection, this report also shows that of the surveyed countries 71% (39 countries) have collected data on the education and employment of people with disabilities, but that there are still quite a few countries in which no official data has ever been collected.



CONCLUSIONS

On the European level the commitment to support ICTs in education for learners with disabilities and special educational needs is visible, not only through the formal approval of the UNCRPD by the European Union, but also within various policy documents.

However, within the past ten years, the main focus as well as supporting arguments have changed. Earlier documents, such as the Riga Declaration, stress inclusion – in the sense of inclusion of people with disabilities in all aspects of society. The actual term ‘inclusion’ in newer policies either does not exist or is interpreted differently.

Generally the use and understanding of vital terms such as ‘inclusion’, ‘accessibility’ or ‘disabilities’ are not consistent over the years or across policy sectors. In some cases, ‘access’ or ‘accessibility’ is specified as being defined in line with the UNCRPD. However, in other cases ‘access’ only refers to the existence of ICT and not the degree to which this technology is usable by people with disabilities. Some newer policies do not even mention these terms or refer to underlying policy in which they are already defined. It could be argued that all these issues are considered ‘implied’ in all policy through the signing of the UNCRPD. However, **concrete terminology and indicators must be agreed to make evidence of developments in this area available and to track progress towards providing accessible ICT to enhance equitable learning opportunities for people with disabilities.**

The key argument of the necessity of accessible ICT has also developed from an ethical approach to a more economic approach. While the UNCRPD chose in its preamble to recognise ‘the inherent dignity and worth and the equal and inalienable rights of all members of the human family’ (United Nations, 2006, p. 1), newer EU policies such as the Europe 2020 Strategy and the Digital Agenda set ‘inclusive growth’ as a policy priority, focus on the roll-out of high-speed internet and argue the economic advantage of people with disabilities being able to participate in the workforce, as well as the growing market for accessible goods. The latter argument is led by the demographic development and the realisation that the ageing population benefits from many of the accessibility features that people with disabilities need to use ICT efficiently. Although the arguments may have changed to support accessible ICT, this must not be seen as a purely negative development. On the contrary, **all arguments focusing on providing accessible ICT have the potential to create synergies, which may equally benefit people with disabilities, the ageing population as well as all members of society.**

This current focus on specific groups effected by inaccessible ICT seems to be influenced by the growing economic crisis, particularly in Europe. The *Special Eurobarometer 393* (European Commission, 2012b) found, through national analysis, that an absolute majority of Europeans consider limited accessibility a form of discrimination, but are divided with regard to the effectiveness of national policy to combat discrimination and that ‘more than half of Europeans (54%) think that the economic crisis has adversely affected the importance and funding of policies promoting equality and diversity’ (p. 83). The latter view is strongest in countries that are most severely impacted by the economic crisis, such as Spain, Greece and Cyprus.

The fact that the drive towards equity in education through the support of accessible ICT is being overshadowed by negative economic developments highlights that **overarching European and international policies must continue to take a stable position and lead in this field.**



The current economic developments are not the only adversary effects faced by European and international policy. Often policy cannot keep pace with emerging technologies. The UNCRPD is one of the few that policies has considered accessibility and inclusion in the widest sense and stressed innovative approaches. There are many emerging discussions within ICT for Inclusion, such as the use of mobile technologies, open education resources and online education portals, which future policy will have to consider in order to ensure all educational and technological opportunities are open to all learners, regardless of their abilities, disabilities, remote location or age and ensure a truly accessible lifelong learning experience for all. To achieve this **all policy efforts must continue to take an open and holistic approach across all policy sectors with the active participation of all stakeholders involved.**



ANNEXES

Annex 1 - ICT for Inclusion Policy Matrix

The ICT for Inclusion Policy Matrix aims at providing an overview of existing European and international policy and how these policy address 5 key areas:

- ICTs to promote equity in educational opportunities
- Access to appropriate ICTs
- Training of educational staff
- Promotion of ICT research and development
- Data collection and monitoring

These 5 areas correspond to the 5 key propositions developed in the report ICT for People with Disabilities – Practice Review, jointly developed with UNESCO IITE and the Agency (UNESCO IITE and the European Agency for Development in Special Needs Education, 2011). This matrix indicates which areas are covered by the corresponding policies. Representative quotes are included for selected policies.



1.1 International Policy relevant for ICT and Inclusion

	ICTs to promote equity in educational opportunities	Access to appropriate ICTs	Training of educational staff	Promotion of ICT research and development	Data collection and monitoring
United Nations Millennium Declaration		“ensure that the benefits of new technologies, especially information and communication technologies ... are available to all”			
UN CRPD (2006)	✓	✓	✓	✓	✓
WSIS – Tunis Commitment	✓ indirectly	✓	“capacity building at all levels is needed”	✓	✓
WSIS – Tokyo Declaration (2003)	“equitable access to information for educational, scientific, economic, social, political and cultural activities...” (p.2)	ubiquitous and “equitable access to ICTs for persons with disabilities” (p.4)	“Teachers act as a gateway to the Information Society, and their skills development and curriculum resources need increased support.” (p.7)	✓	
Accra Commitments (2005)		“Providing universal, equitable and affordable access to ICT will create access opportunities for all.” (p.2)	✓	✓	
San Salvador Commitment (2008)	✓	“Promote and foster ICT quality while ensuring ICT sustainability and access for persons with disabilities with a view to the genuine social, educational, cultural and economic inclusion of all social sectors, especially vulnerable groups.” (p.6)	✓	✓	“evaluate the implementation ... and establish verifiable policy measures...”(p.4)



2.2 European Policy relevant for ICT and Inclusion

	ICTs to promote equity in educational opportunities	Access to appropriate ICTs	Training of educational staff	Promotion of ICT research and development	Data collection and monitoring
Council Resolution on e-Learning (2001)	✓ 'ensure access to ICTs for everyone' (p. 1) (but no specific mention of disabilities or special needs).		✓	✓	
The eLearning Action Plan (2001)	✓ Taking account of individual differences in learning, and special needs education. Exploiting the potential of new technology to provide remedial measures in the case of disability, exclusion, difficulty in gaining access to learning, or where conventional education does not work.			✓	✓
Standardisation Mandate 376 (Phase 1) (2005)	✓			✓	✓
eInclusion Riga Ministerial Declaration (2006)		✓		✓	✓
Key Competences for Lifelong Learning (2006)	ICT as key competence for ... social inclusion (but no mention of disabilities or special needs).				
Council Resolution on the Situation of Persons with Disabilities in the European Union (2008)	'Accessible built environments, transport and Information and Communication Technology (ICT), both in urban and rural areas, are crucial for the realisation of a society which provides genuine access to equal rights...' (p. 2).	✓		✓	✓
New Skills for New Jobs (2008)	'Irrespective of age, gender, socio-economic background, ethnicity or disability, all EU citizens should have the opportunity to acquire and develop the mix of knowledge, skills and aptitudes they need to succeed in the labour market (p. 10). 'By 2012, propose				



	ICTs to promote equity in educational opportunities	Access to appropriate ICTs	Training of educational staff	Promotion of ICT research and development	Data collection and monitoring
	an EU-wide approach and instruments to support Member States in the integration of ICT competences and digital literacy (e-skills) into core lifelong learning policies' (p. 20).				
European Commission Conclusions on Accessible Information Society (2009)	✓ 'Improve the accessibility and usability of ICT-supported education material and methods, thus ameliorating the learning chances of persons less familiar with ICT as well as persons with disabilities' (p. 5)	✓	Promoting the accessibility of education and educational materials – staff not mentioned	✓	✓
Council Conclusions on Post i-2010 Strategy – towards an open, green and competitive knowledge society (2009)	'That the scope of ICT policy will need to expand from enabling the information society towards maximising the way in which ICT contributes to the EU's progress towards an open, green and competitive knowledge society' (p. 3).			✓	✓
European Disability Strategy (2010)		✓	✓		✓
Digital Agenda for Europe (2010)	More focused on economic aspects 'deliver economic and social progress and social benefits ...'.		Training of teachers for eLearning and 'inclusive digital services'	In general, but not in relation to accessibility Pillar V: Research and Innovation	In general. Pillar VI: Action 67: Member States to implement provisions on disability Benchmark indicators do not include people with disabilities or special needs.
Memorandum of Understanding on Digital Access for Persons with Disabilities (2010)	Pillar IV of Digital Agenda: Helping disabled people to access content. Memorandum of Understanding which focuses on accessibility for the print disabled.	Access to digital content for the visually impaired.			



	ICTs to promote equity in educational opportunities	Access to appropriate ICTs	Training of educational staff	Promotion of ICT research and development	Data collection and monitoring
Council conclusions: Support of the implementation of the European Disability Strategy 2010-2020 (2011)	‘f) Education and training i) support relevant initiatives aiming to ensure that persons with disabilities have access to quality education and training on an equal basis with others, so as to increase their knowledge, skills and qualifications in order to promote their mobility and employability; ii) promote the exchange of good practices, including comparative studies, with regard to support and assistance for persons with disabilities, with a view to improving their access to the education system at all levels, including, for example, by using assistive technologies.’	✓		✓	✓
Gdansk Roadmap for Digital Inclusion (2011)	‘enhance the value of human capital through empowerment’ (p. 1).			More focus on peer learning and peer support communities as well as informal stakeholder platforms for knowledge exchange.	
Human Factors (HF): Accessibility requirements for public procurement of ICT products and services in Europe (Phase 2 of Mandate 376) (2012)		✓ European Standard for accessibility in public procurement			
European Accessibility Act: Legislative initiative to improve accessibility of goods and services on the internal market (Roadmap)	Indirectly: ‘Improve the inclusion and participation of persons with disabilities in the European society and economy’ (p. 2). Main aim to provide legal leverage for accessibility and inclusive design in public				



	ICTs to promote equity in educational opportunities	Access to appropriate ICTs	Training of educational staff	Promotion of ICT research and development	Data collection and monitoring
(2012)	procurement.				



Annex 2 – ICT and Education policy

All documents were last accessed on 15 April 2013.

African Information Society, 2005. *Accra Commitments for WSIS Tunis*.

<http://www.itu.int/wsis/docs2/regional/outcome-accra.pdf>

Commission of the European Communities, 2008. *Commission Staff Working Document accompanying the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, {COM (2008) 868 final}, New Skills for New Jobs: Anticipating and matching labour market and skills needs*. Belgium. http://ec.europa.eu/education/lifelong-learning-policy/doc/sec3058_en.pdf

Council of the European Union, 2001. *Council Resolution of 31 July 2001 on e-Learning*. (2001/C 204/02) <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2001:204:0003:0005:EN:PDF>

Council of the European Union, 2008. *Resolution of the Council of the European Union and the representatives of the Governments of the Member States, meeting within the Council of 17 March 2008 on the situation of persons with disabilities in the European Union*. 2008/C 75/01. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2008:075:0001:0004:EN:PDF>

Council of the European Union, 2009a. *Council Conclusions on 'Post i-2010 Strategy – towards an open, green and competitive knowledge society'*.

http://www.consilium.europa.eu/uedocs/cms_Data/docs/pressdata/en/trans/111999.pdf

Council of the European Union, 2009b. *Council Conclusions on Accessible Information Society*.

http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/trans/107014.pdf

Council of the European Union, 2010a. *Council conclusions on Digital Agenda for Europe*.

http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/trans/114710.pdf

Council of the European Union, 2010b. *Council conclusions on the social dimension of education and training*.

http://www.consilium.europa.eu/uedocs/cms_Data/docs/pressdata/en/educ/114374.pdf

Council of the European Union, 2011. *Council conclusions. Support of the implementation of the European Disability Strategy 2010–2020*.

http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/lsa/122819.pdf

ETSI Technical Committee Human Factors (HF) and the eAccessibility Joint Working Group (JWG) of CEN/CENELEC/ETSI, 2011. *Human Factors (HF): European accessibility requirements for public procurement of ICT products and services*. DEN/HF-00125.

<http://www.mandate376.eu>

European Commission, 2007. *Key Competences for Lifelong Learning: European Reference Framework*. Belgium. http://ec.europa.eu/dgs/education_culture/publ/pdf/ll-learning/keycomp_en.pdf

European Commission, 2010a. *A Digital Agenda for Europe*. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0245:FIN:EN:PDF>



European Commission, 2010b. *Europe 2020. A strategy for smart, sustainable and inclusive growth*. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:2020:FIN:EN:PDF>

European Commission, 2011. *European Accessibility Act: legislative initiative to improve accessibility of goods and services in the Internal Market*. http://ec.europa.eu/governance/impact/planned_ia/docs/2012_just_025_european_accessibility_act_en.pdf

European Commission Enterprise and Industry Directorate-General, 2005. *Standardisation Mandate to CEN, CENELEC and ETSI in Support of European Accessibility Requirements for Public Procurement of Products and Services in the ICT Domain*. (M376) Brussels. http://www.icts.org/Working_Groups/DATSCG/Documents/M376.pdf

Information Society in Latin America and the Caribbean, 2008. *San Salvador Commitment Adopted at the Second Ministerial Conference on the Information Society in Latin America and the Caribbean, San Salvador, 6–8 February 2008*. [http://ec.europa.eu/europeaid/where/latin-america/regional-cooperation/alis/documents/action_plan_for_the_information_society_in_lac_\(elac2010\).pdf](http://ec.europa.eu/europeaid/where/latin-america/regional-cooperation/alis/documents/action_plan_for_the_information_society_in_lac_(elac2010).pdf)

International Disability Alliance (IDA) and International Disability and Development Consortium (IDDC), 2012. *Make the post-MDG framework of persons with disabilities – position paper*. <http://www.internationaldisabilityalliance.org/en/article/ida-and-iddc-post-mdg-position-paper-and-listserv>

Ministers of European Union, 2006. *Ministerial Declaration on ICT for an Inclusive Society*. Riga. http://ec.europa.eu/information_society/events/ict_riga_2006/doc/declaration_riga.pdf

UNESCO, 2009a. *National Information Society Policy: A Template*. http://ifap-is-observatory.itk.hu/sites/default/files/NISP_FINAL.pdf

UNESCO, 2009b. *Information for All Programme (IFAP)*. <http://www.unesco.org/new/en/communication-and-information/intergovernmental-programmes/information-for-all-programme-ifap/>

UNESCO, International Bureau of Education (IBE), 2008. *Inclusive Education: the way of the future. Conclusions and recommendations of the 48th session of the International Conference on Education, Geneva, 25–28 November 2008*. UNESCO IBE.ED/BIE/CONFINTED 48/5. Geneva, Switzerland. http://www.ibe.unesco.org/fileadmin/user_upload/Policy_Dialogue/48th_ICE/ICE_FINAL_REPORT_eng.pdf

United Nations, 2006. *Convention on the Rights of Persons with Disabilities*. <http://www.un.org/disabilities/>

United Nations, 2011. *Resolution adopted by the General Assembly. 65/186. Realizing the Millennium Development Goals for persons with disabilities towards 2015 and beyond*. <http://www.un.org/disabilities/default.asp?id=1590>

World Summit on the Information Society, 2003. *Declaration of Principles and Plan of Action*. http://www.itu.int/wsis/documents/doc_multi.asp?lang=en&id=1161%7C1160

World Summit on the Information Society, 2005. *Tunis Commitment*. http://www.itu.int/wsis/documents/doc_multi.asp?id=2266%7C0

World Summit on the Information Society Asia-Pacific Regional Conference, 2003. *The Tokyo Declaration – the Asia-Pacific perspective to the WSIS*. http://www.itu.int/wsis/docs/rc/tokyo/tokyo_declaration.pdf



Annex 3 – Supporting documents for ICT and Education policy

Applica & CESEP & Alphametrics, 2007. *Men and Women with Disabilities in the EU: Statistical Analysis of the LFS ad hoc module and the EU-SILC*. Final report of study undertaken for the European Commission.

<http://ec.europa.eu/social/BlobServlet?docId=3008&langId=en>

Commission of the European Communities, 2006. *Communication from the Commission to the Council and to the European Parliament. Efficiency and Equity in European Education and Training Systems*. COM(2006) 481 final. Brussels.

http://ec.europa.eu/education/policies/2010/doc/comm481_en.pdf

Cullen, K. (WRC), Kubitschke, L. (empirica), Boussios, T. (EWORX), Dolphin, C. (WRC), Meyer, I. (empirica) et al, 2008. *MeAC – Measuring Progress of eAccessibility in Europe. eAccessibility status follow-up 2008*. Study commissioned by the European Commission.

http://ec.europa.eu/information_society/activities/einclusion/docs/subgroupmtg_jan10/meac_study/meac_follow-up_2008.pdf

Education, Audiovisual and Culture Executive Agency (EACEA P9 Eurydice), 2011. *Key Data on Learning and Innovation through ICT at School in Europe*.

http://eacea.ec.europa.eu/education/eurydice/documents/key_data_series/129en.pdf

European Agency for Development in Special Needs Education, 2012. *Promoting Accessible Information for Lifelong Learning: Recommendations and findings of the i-access project*. Odense, Denmark: European Agency for Development in Special Needs Education.

<http://www.european-agency.org/agency-projects/i-access/i-access-files/i-access-report.pdf>

European Commission, 2010c. *Commission Staff Working Document Accompanying the European Disability Strategy 2010–2020: A Renewed Commitment to a Barrier-Free Europe*. Brussels, 15.11.2010 COM(2010) 636 final.

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0636:FIN:EN:PDF>

European Commission, DG Justice, 2011. *Consultation Document. European Disability Act*. Brussels.

http://ec.europa.eu/governance/impact/planned_ia/docs/2012_just_025_european_accessibility_act_en.pdf

European Commission, 2012a. *Digital Competences in the Digital Agenda. Digital Agenda Scoreboard*. <http://ec.europa.eu/digital-agenda/en/scoreboard>

European Commission (DG Justice) 2012b. *Special Eurobarometer 393. Discrimination in the EU in 2012*. http://ec.europa.eu/public_opinion/archives/ebs/ebs_393_en.pdf

European Commission, 2012c. *The Digital Agenda for Europe – Driving European growth digitally*. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0784:FIN:EN:PDF>

Fembek, M.; Butcher, T.; Heindorf, I.; Wallner-Mikl, C., 2012. *Zero Project Report 2013. International Study on the Implementation of the UN Convention on the Rights of Persons with Disabilities*. <http://www.zeroproject.org/wp-content/uploads/2012/12/Zero-Report-2013-GB1.pdf>

G3ict, 2009. *ICT Accessibility Self-Assessment Framework. Evaluation of Country Compliance With the Dispositions of the Convention on the Rights of Persons with*



- Disabilities On Accessibility of Information and Communication Technologies.*
<http://www.itu.int/ITU-D/asp/CMS/Events/2009/PwDs/docs/G3ict-Self-Assessment-tool.pdf>
- G3ict, 2012. *Convention on the Rights of Persons with Disabilities. 2012 ICT Accessibility Progress Report.* Atlanta, USA. http://g3ict.org/download/p/fileId_936/productId_244
- International Telecommunication Union and UNESCO, 2013. *Technology, Broadband and Education: Advancing the Education for All Agenda.*
http://www.broadbandcommission.org/work/working-groups/education/BD_bbcomm-education_2013.pdf
- Monitoring eAccessibility Consortium, 2011. *Monitoring eAccessibility in Europe: 2011 Annual Report.* Study commissioned by the European Commission.
<http://www.eaccessibility-monitoring.eu/researchResult.aspx>
- Organisation for Economic Co-operation and Development, 2009. *Teaching and Learning International Survey (TALIS).* <http://stats.oecd.org/Index.aspx?DataSetCode=TALIS>
- Organisation for Economic Co-operation and Development, 2010. *Inspired by Technology, Driven by Pedagogy: A Systemic Approach to Technology-Based School Innovations.*
<http://www.oecd.org/edu/ceri/inspiredbytechnologydrivenbypedagogyasystemicapproachto-technology-basedschoolinnovations.htm>
- World Health Organization, World Bank, 2010. *World Report on Disability.*
http://www.who.int/disabilities/world_report/2011/en/index.html
- UNESCO, 2011. *UNESCO and Education. Everyone has the right to education.*
<http://unesdoc.unesco.org/images/0021/002127/212715e.pdf>
- UNESCO, 2013a. *WSIS+10. Review and Strategic Directions for Building Inclusive Knowledge Societies for Persons with Disabilities.* Paris, France.
http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/wsis/WSIS_10_Event/WSIS_review_event-2013_UNESCO_report_disabilities_final.pdf
- UNESCO, 2013b. *The Future of Mobile Learning. Implications for policy makers and planners.* <http://unesdoc.unesco.org/images/0021/002196/219637e.pdf>
- UNESCO, 2013c. *UNESCO Global Report. Opening New Avenues for Empowerment. ICTs to Access Information and Knowledge for Persons with Disabilities.*
<http://unesdoc.unesco.org/images/0021/002197/219767e.pdf>
- UNESCO Institute for Information Technologies in Education and the European Agency for Development in Special Needs Education, 2011. *ICTs in Education for People with Disabilities: Review of Innovative Practice.* <http://www.european-agency.org/publications/ereports/ICTs-in-Education-for-People-With-Disabilities/ICTs-in-Education-for-people-with-disabilities.pdf>
- Valiente, O., 2010. *1-1 in Education: Current Practice, International Comparative Research Evidence and Policy Implications.* OECD Education Working Papers, No. 44. Paris: OECD Publishing. http://www.oecd-ilibrary.org/education/1-1-in-education_5kmjzwl9vr2-en
- World Health Organization, 2001. *International Classification of Functioning, Disability and Health.* Geneva: WHO. <http://www.who.int/classifications/icf/en/>
- World Health Organization / World Bank, 2011. *The World Report on Disability.* WHO/World Bank: Geneva

Secretariat:

Østre Stationsvej 33
DK-5000
Odense C
Denmark
Tel: +45 64 41 00 20
secretariat@european-agency.org

Brussels Office:

Avenue Palmerston 3
BE-1000
Brussels
Belgium
Tel: +32 2 280 33 59
brussels.office@european-agency.org

www.european-agency.org

