

**Implementing e-inclusion in Flanders: going beyond access?  
A critical analysis of e-inclusion initiatives and their ability  
to improve multiple digital literacies.**

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**Abstract:** Throughout the last decade it has become clear that the digital divide needs to be considered as a complex phenomenon covering a wide range of exclusion mechanisms at the level of access, usage and multiple digital literacies. Simultaneously, a vast number of e-inclusion initiatives has emerged — top-down and bottom-up — trying to address these problems of exclusion. Hence a highly scattered, disorganized and unidentified field of approaches to the implementation of e-inclusion has surfaced, leaving policy stakeholders unaware of the scope, effectiveness and sustainability of these approaches and initiatives. In Flanders, a study was launched in order to 1) gain a comprehensive insight in existing initiatives and their modus operandi; and 2) generate policy recommendations related to identified gaps and lacking synergies. The theoretical part of this study is framed within existing perspectives on the digital divide of the second degree and, in addition, focuses on the significance and repercussions of lifestyles, life stages and social capital on ICT-usage and the acquirement of digital literacies. The empirical part of this study consists of a quantitative inventory of nearly 400 e-inclusion initiatives in Flanders, hereby considering 1) sustainability; 2) usage opportunities; and 3) training opportunities. Particular attention is given to the content of available training opportunities — which aspects of multiple literacies are being taught — and to the pedagogical approach — demand or supply driven, type of assistance, course material and group size. Subsequently, a threefold brainstorm session with various stakeholders from government, universities and civil society is organized during which the results from the quantitative analysis are discussed and translated into valuable policy recommendations. Though the empirical part of the study is still ongoing, it is already clear that very little attention is given to the e-inclusion of youngsters, this in spite of the obvious need to upgrade their informational and strategical skills. Also, it is expected that the majority of the e-inclusion initiatives aim at supplying access to computers and the Internet, and far less at empowering citizens and focusing on the acquirement of digital literacies.

**Keywords:** digital literacies, e-inclusion, implementation, complexities of digital divide

## **Introduction**

The last decade digital divide research has been marked by an important transition indicating that the digital divide should no longer be considered as a dichotomous

concept between *haves* – those with access to ICT – and *have nots* – those without access. Different elements explain why this transition took place. First, empiric research showed that once people have access to computer and the Internet significant differences in usage occur. Hence it was made clear that different people use computers and the Internet in many different ways and for many different reasons. (Anderson & Tracey, 2001) Second, several studies indicated that the use of ICT necessitated the attainment of new skills like for example the skills to search, select, evaluate and use information made available through the Internet. (van Dijk, 2005, 1999; Mossberger et al., 2003) Third, different academics argued that access alone did not guarantee ICT-use as such or even so a meaningful and advantageous use of ICT. Moreover, a lack of skills and a negative attitude towards ICT appeared to hamper the take-up of ICT regardless if people have access to computer and the Internet. (Brotcorne et al., 2010, 2008; Livingstone & Helsper, 2007; Selwyn, 2004; Mossberger et al., 2003) Finally, research indicated that access and use are not a fixed two-sided situation in which people do or do not have access or use or do not use computers and the Internet. People can have access in their work environment, at school or at a friend's house but not at home. They can for example use social network sites and email but no e-government applications. Hence – as van Dijk (1999) stated – access and use should rather be expressed as “*a stretching of the whole spectrum of positions across populations.*”

Van Dijk (1999, 2005) was one of the first academics to point out the multifaceted aspect of the digital divide by conceptualizing access as a fourfold unit that comprises mental access, material access, skills access and usage access. Mental access refers to the limited take-up of ICT caused by a lack of interest and a negative attitude towards the use of ICT. Material access concerns the lack of actual ICT-material, namely a computer or an Internet connection. Skills access deals with the lack of digital skills caused by the low user friendliness of ICT and the lack of educational and social support networks. Usage access refers to the lack of usage opportunities and the uneven spread of these opportunities across society. Recent empirical research confirms van Dijk's hypothesis and reinforces the need to conceptualize the digital divide according its current complexity and multifaceted character. (Brotcorne & Valenduc, 2008; Livingstone & Helsper, 2007; Barzilai-Nahon, 2006; van Dijk, 2005; Selwyn, 2004; Hargittai, 2004; Warschauer, 2003)

As a consequence different questions arise. In what way should the notion of the *digital divide* be reconsidered? What aspects have become more or less important? What does this imply for future research, policy and civil society? Do government and civil society undertake actions in line with current complexities and changes of today's *digital divide*? This study seeks to address each of these questions. It is based on recent theoretical insights regarding the use of ICT and digital literacies. Particular attention is given to the influence of non-traditional aspects like social networks, lifestyles and life stages. The study consists of a quantitative survey amongst 400 e-inclusion initiatives and examines their modus operandi, pedagogical approach and sustainability. This quantitative approach is complemented by a threefold brainstorm session with civil society on the most occurring barriers and problems to the implementation of e-inclusion.

## Reconsidering van Dijk's traditional barriers

The four barriers described by van Dijk (1999) – material access, mental access, usage access and skills access – reappear frequently throughout research on new media and social exclusion mechanisms. Yet with the continuous digitization of society each of these barriers has evolved and has become more complex.

### *Material and mental access*

The notion of *material access* might seem straightforward but in reality it is closely intertwined with the concept of *ICT* because it refers to the possession of one or more *ICT*. In most research *ICT* is operationalized as computer and/or the Internet. (Hargittai, 2004) Yet, exclusion mechanisms may also exist at the level of other *ICT* like interactive digital television, mobile phones, games or digital photography. (Brotcorne et al., 2010) As digitization of society progresses it is important to consider the notion of the digital divide for each new technology and this at the level of material access, motivation, skills and usage. (Selwyn, 2004)

Also mental access demands for a more varied scope in future research. First, it is highly likely that mental access is a major structural problem. In countries like the Netherlands where material access is spread to approximately 90% of the population, mental access seems to be the most important barrier for the remaining 10%. A same situation might be expected in other countries. (van Deursen & van Dijk, 2009, Verdegem & Verhoest, 2009) Second, current research shows that there are invisible non-users. Country-based surveys only reflect the view of one household member. Non-users within households with access and certain usage patterns can thus not be identified. It makes it also impossible to study the reasons for this non-use and the influence of household dynamics on this non-use. (Mariën & Van Audenhove, 2008)

### *Usage access*

Regarding *usage* recent studies indicate a growing importance for aspects related to the context of use. It is made clear that the notion of *usage* transcends the idea of lack of usage opportunities. Additionally aspects like autonomy of use, quality of use or user experience also appear to have an important influence on (non-)use. (Hargittai, 2003) The notion of *usage* still is related to what type of applications people are able to use within their social context but is also about why people use these applications, for what goals and in which places and contexts. Even so important as an indicator for (non-)adoption or domestication of certain technologies is the meaning that coincides with *ICT*-use in people's daily reality (Brotcorne et al., 2010) Research shows that *ICT*-use increases when there is an actual need and added value for this use. Motivational aspects for (non-)use should therefore be considered within their social contexts. (Manueli et al., 2007; Moreas, 2007; Selwyn et al., 2005; van Dijk, 2005; Wellman & Haythornthwaite, 2002) People's resources – technical, financial, cognitive, social and cultural – are additional aspects that are crucial for the take-up of *ICT*-use. (Zillien & Hargittai, 2009; Moreas, 2007; van Dijk, 2005) Also, where differences in usage are noticed, it is necessary to examine whether these differences are caused by or lead to social exclusion mechanisms. Hence, striving for e-inclusion demands for an all-round approach in which access is accompanied by the creation of opportunities of use closely related to real-life situations of people and characterized

by a meaningful added value of these opportunities of use. (Brotcorne et al., 2010; Selwyn et al., 2005)

### *Skills access*

The notion of *digital skills* or *digital literacies* has become of growing importance in current research. It is of no use to provide access to new technologies if people lack the necessary skills to use these technologies. (Mossberger et al., 2003) Globally, three kinds of skills can be identified: basic literacy skills, cognitive skills and specific ICT-related skills. Basic literacy skills are an absolute prerequisite to enable the use of for example computer and the Internet as the reading of texts is required at all times. (Lankshear & Knobel, 2008; Mossberger et al., 2003; Dekkers & Kegels, 2003) Furthermore, cognitive skills are needed to handle the complex and multilayered design of most ICT. (van Dijk et al., 2000) Also, cognitive skills often predetermine people's capabilities to learn, acquire and attain a certain level of other competencies like literacy, communication or the interpretation of the meaning of information. (Lankshear & Knobel, 2008; Lievrouw, 2001)

Steyaert (2000), van Dijk (1999) and van Deursen & van Dijk (2009) developed an elaborate framework of specific ICT-related skills. As a whole they identified four types of digital skills: operational (or instrumental) skills, formal (or structural) skills, information skills and strategic skills. *Operational skills* refer to the so-called *button knowledge* or the capability of knowing how to handle computers, programs or other devices. *Formal or structural skills* point out the competencies that are needed in order to comprehend the specific structure of a medium. On the Internet users need to be able to use hyperlinks or navigate between web pages. *Information skills* are about the ability to look, find, select, evaluate and apply information. The notion of *information skills* is not new in the sense that the use of traditional media like books or newspapers even so demand for information skills. Strategic skills include the ability to use ICT for the improvement of one's personal societal position. (van Dijk, 1999; Steyaert, 2000; van Deursen & van Dijk, 2009)

As a whole, digital skills can be conceptualized as “*not only the skills to operate computers and network connections, but also as the skill to search, select, process and apply information from a superabundance of sources and the ability to strategically use this information to improve ones position in society.*” (van Dijk, 1999) Another conceptualization developed by Martin (2006) clearly shows the multifaceted and complex character of digital literacy: “*Digital literacy is the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyse and synthesize digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action; and to reflect upon this process.*”

### **Additional indicators that influence ICT-domestication**

Each of the four traditional barriers mentioned above are of high importance with regards to the adoption and domestication of new media. However, with time research has identified additional elements that stimulate or hamper the take-up of ICT like for example social networks and lifestyles or life stages.

### *The social capital of social networks*

A large number of studies emphasize the way in which social networks influence the take up of ICT at the level of material access, usage and skills. (Brotcorne et al., 2009; Moreas, 2007; Mariën, 2007; van Dijk, 2005; Selwyn, 2004; Haddon, 2004; Bakardjieva & Smith, 2001; van Dijk et al., 2000) According to van Dijk et al. (2000) three kinds of resources shape the social capital of people with regards to ICT. A first resource consists of those people in one's social networks that have material access to ICT. A second resource is formed by the availability of digital skills within one's social networks. A third resource is shaped by the willingness and ability of people with ICT-access and skills to administer ICT-related support to other members of their social networks. Friends and family that provide this kind of technical and emotional support are called *warm experts*. (Haddon, 2004; Bakardjieva & Smith, 2001)

Research shows that the more people have access to these three kinds of resources, the less effort is needed to evolve towards the effective adoption and domestication of ICT. The presence and the use of ICT within a social network stimulates members to follow existing trends and motivates members to use new applications. ICT-rich social networks also provide the necessary opportunities of use. (Moreas, 2007; Crang et al., 2006; van Dijk, 2005, 2003; Haddon, 2004; van Dijk et al., 2000) Furthermore, being part of heterogeneous social networks increases the chances of living in an ICT-rich environment. Moreover, the more people participate in society, the more likely they are to belong to heterogeneous networks. Hence, because disadvantaged groups as for example people in poverty, undereducated, low waged or unemployed people participate less in society, they most often belong to few and very small homogeneous social network. Other members are in most cases even so disadvantaged. Hereby the chances for spontaneous take up of ICT are limited because their homogeneous social network consists of an ICT-poor environment and does not offer the necessary resources to stimulate use. (Moreas, 2007; Mariën, 2007; van Dijk, 2005; Dekkers & Kegels, 2003) An additional aspect regarding the importance of social networks is that their influence can also be negative. Belonging to a social network in which a negative attitude towards ICT prevails can push members to voluntarily reject the use of ICT. (Dekkers & Kegels, 2003)

### *Importance of life stages and lifestyles*

Few studies focus on the significance of life stages and lifestyles. However, results suggest their importance for the take-up of ICT. (Selwyn et al., 2003; Anderson & Tracey, 2001; Ribak, 2001) Three aspects are brought forward: education, employment and household context.

Education and employment both are specific to a certain life stage and appear to be the most common place where people get the opportunity to use ICT or improve their digital skills. However, at the level of employment a clear distinction exists between low and high educated and between manual workers and knowledge workers. Respectively 3% and 46% of low- and high-educated youngsters and 22% and 68% of manual and knowledge workers use the Internet in their work environment. (Brotcorne et al., 2010) Employers also provide more ICT-related training

opportunities for high-educated workers than for low-educated or manual workers even when certain ICT-skills are essential for their job. (Mariën & Van Audenhove, 2008) The existence of digital exclusion mechanisms at the level of employment brings about additional questions and calls for more research. Does the work related lifestyle of low educated people – manual work, homogeneous social networks, limited social participation, limited training opportunities – lead to systems of digital and social exclusion? In addition, what about people who do not follow the presumed life stages and who do not participate in education or employment? Do differences in lifestyles lead to structural forms of digital deficiency and social exclusion?

Research shows that life stage transitions – moving from one life stage to another – influences the use of ICT. Young teens still live at home, have few financial responsibilities and worry little about life determining choices. Their ICT-use will mostly focus on leisure and communication oriented applications. Once these teens get older and have to decide about their future education and employment options, their ICT-use changes accordingly. They will start to use the Internet in a more strategic way. (Livingstone, 2007; Anderson & Tracey, 2001) Changes in family situation can also influence access or usage. Households with children are much more likely to have home access than households without children. (Brotcorne et al., 2009; Kennedy et al., 2008; Moreas, 2007)

The household context reflects a certain life style and attitude towards ICT. (Brotcorne et al., 2010, 2009; Mariën & Van Audenhove, 2008; Kennedy et al., 2008; Hargittai, 2008; Moreas, 2007; Livingstone, 2007; van Dijk, 2003; Anderson & Tracey, 2001; Bakardjieva & Smith, 2001) Different studies show that the attitude of household members towards ICT is a predetermining factor for ICT-use. When parents have a negative attitude towards ICT or lack the necessary skills to guide their children throughout their Internet use, they will more often put limits to their children's Internet use. (Brotcorne et al., 2009) Existing power relations within households also influence (non-)use of household members. Often women are afraid to use the computers or the Internet because of the dominant position of their children and men. (Mariën & Van Audenhove, 2008; Selwyn et al., 2005; Ribak, 2001)

### **A call for a new terminology**

All arguments mentioned above strengthen the call for a new terminology. The notions of *digital divide* as such no longer reflects the current complexity and multifaceted aspect of exclusion mechanisms related to new media. On the contrary, the denomination *digital divide* is misleading for several reasons. It suggests a one-dimensional gap between *haves* and *have nots* whereas research clearly indicates that digital exclusion is multidimensional and linked to a multitude of elements. In reality there exist not one but many *digital divides*. (Verdegem & Verhoest, 2009; Barzilai-Nahon, 2006; Hargittai, 2004; Selwyn, 2004; Warschauer, 2003) The term also insinuates a static condition, while several studies demonstrate that aspects like usage patterns and necessary skills evolve constantly. (van Dijk, 1999, 2005; Frissen, 2000) A vast number of academics call for a change in terminology and opt for the use of the notion of *digital inequality* or – with a more positive connotation – *digital inclusion* instead of *digital divide*. (Brotcorne et al., 2010; van Dijk, 2005, DiMaggio et al., 2004; Selwyn, 2004; Hargittai, 2003, 2004)

## **e-Inclusion in Flanders**

In today's Western society *material access* has become irrelevant for most people as prices for computers and Internet connection have dropped significantly over the last ten years. However, for a vast number of socially disadvantaged groups like undereducated, unemployed or low-waged people and people in poverty material access remains highly problematic. Their financial situation is too precarious and does not enable them to procure the necessary equipment and associated materials like a printer, ink and paper or storage devices. (Mariën, 2007; Vranken & Vandebosch, 2007)

Moreover, the same disadvantaged groups encounter the most problems at the level of *usage* and *skills*. Disadvantaged groups show a more leisure-oriented use of ICT, whereas other groups more often reap the benefits of their ICT use. (Zillian & Hargittai, 2009; Brotcorne et al., 2009; van Dijk, 2008, 2005; Moreas, 2007, Livingstone & Helsper, 2007) Disadvantaged groups very often lack the basic ICT-skills. As they do not have home access, they are less able to learn certain digital skills via trial and error. (Hargittai, 2008; Dekkers & Kegels, 2003; Mossberger et al., 2003; van Dijk, 2003; van Dijk et al., 2000) In addition, a so-called *learning divide* exists. Disadvantaged and undereducated groups are less likely to participate in education and training because of several reasons. They very often lack the ambition and confidence to engage in learning activities because of negative learning experiences in the past, lack of self-confidence and low levels of self-esteem and tend to reject learning opportunities by formal education. (Mariën & Van Audenhove, 2008) As a consequence, the digital skills of disadvantaged groups and undereducated people will rarely be improved by offering formal education opportunities. Low levels of self-confidence and self-esteem also hinder the social integration of disadvantaged groups and make that they rarely transcend their well-known limited and homogeneous network. (Mariën, 2007)

This implies that in order to stimulate adoption and domestication of ICT, e-inclusion initiatives need to overcome existing social, cultural and practical barriers by embedding initiatives in people's daily reality and existing social networks. (Selwyn et al., 2005; Wellman & Haythornthwaite, 2002) One of the main goals should be to incite and stimulate disadvantaged groups to engage in learning activities by creating positive learning experiences. Main idea here should be to focus on the creation of an added value of the use of ICT related to the daily needs and demands of disadvantaged groups. (Verdegem & Verhoest, 2009; Manuelli et al., 2007; Moreas, 2007; Selwyn et al., 2005; van Dijk, 2005)

### *Flanders' e-inclusion policy*

In Flanders there exists no top down policy with regards to the implementation of e-inclusion initiatives. The Flemish government does not provide or organize alternative access to ICT for disadvantaged groups in a structural way. As a result a highly scattered field of e-inclusion initiatives has submerged. This situation brings about several problems. Firstly, policy makers are currently unaware of the number, scope, approach or actual impact of existing initiatives. They have no idea what kind of initiatives exist, which groups are and are not reached or what approaches are successful at the level of further social inclusion. Secondly, there is no clear

conceptualization of what a *public computer space* should be. In reality this could be everything from one computer hidden away somewhere in an office to a highly organized initiative in which access to computers is offered along with coaching and additional training facilities. Thirdly, the government does not foresee structural funding for existing initiatives. Initiatives are mainly financed via project calls from different institutions. The lack of structural funding has led to a situation in which the sustainability of existing and well-functioning initiatives is at risk. Often initiatives are brought to an end after one year due to a lack of financial resources.

The specific structure of the Belgian State – federal, regional and community bound governments – brings about other issues that hamper an all-round approach to e-inclusion. Firstly, each governmental entity works separately within its own field of competence. Secondly, so far collaboration between governments, departments and civil society remains extremely limited. As a result some governmental actions to implement e-inclusion initiatives or to provide support for civil society still focus solely on providing material access to computers. Governmental actions are currently not based on an all-round approach that takes into account the current complexities of the digital divide and does not foresee in the simultaneous deliverance of material, coaching, pedagogical and technical support. (Mariën et al., 2010)

### *Methodology*

An empirical study was launched in order to 1) gain insight in the particularities of the Flemish field of e-inclusion initiatives and 2) develop adequate recommendations to improve e-inclusion policy in Flanders. The study consisted of two parts. First, an inventory of existing initiatives was realized to get a comprehensive view on the different actions and approaches that are currently accomplished by civil society. Through an online questionnaire the *modus operandi* (target groups, number of visitors, number of available computers, focus of public computer space...), *pedagogical approach* (type of coaching, focus of training opportunities, type of learning materials, group size, focus on follow-up courses...) and *sustainability* (local embedding, number and type of partners, type of provided support, financing mechanisms...) of nearly 400 initiatives was mapped.

Second, a threefold brainstorm session was organized with civil society organizations in order to 1) identify current problems and barriers; and 2) reflect upon possible policy interventions to reduce these problems and barriers. During the brainstorm session participants were seated around small tables, to allow for a more relaxed and open conversation to take place. At regular intervals the participants moved to new discussion subjects by moving from table to table. The following issues were discussed throughout the brainstorm session:

- 1) Custom-made learning methodologies
- 2) Follow-up courses & motivation of participants
- 3) Technical issues
- 4) Coaching
- 5) Promotion aimed at reaching (potential) participants



### *Implementation of e-inclusion in Flanders*

The inventory indicates that most e-inclusion initiatives – 48% – focus on providing public access to computers and the Internet in combination with training opportunities. Only 14% exclusively consists of access to computers or the Internet whereas 38% solely focuses on providing courses and training.

The majority of the initiatives are small-sized: in 66% a maximum of 10 computers are available. Only in 3% more than 50 computers are at hand. All computer spaces but one are equipped with an Internet connection. Geographically, a slight majority – 61% – is located in the city. Logically most computer spaces are organized at a fixed place. For training opportunities this is not the case: 42% of the available courses takes place on demand in schools, cultural, social or other organizations. Access to the public computer spaces is free in 88%. The price of courses and training is higher: 41% of Internet and computer courses are free, 12% is priced less than 5 Euros, 18% is priced over 26 Euros and in 16% a guarantee is asked to avoid drop-out.

Concerning the allowed use of applications in public computer spaces results indicate that certain restrictions exist for specific aspects. The use of applications like Word, Excel or Google is freely allowed. The use of computers is more freely than that of the Internet. Computer games are tolerated in 83% of the public computer spaces. As for Internet the use of email, news or information related searching is completely free. The download of software, music and videos on the contrary is forbidden in nearly 50% of the public computer spaces.

Regarding public access of available computer spaces results show that 87% of existing computer spaces are entirely public meaning that every citizen is welcome. Additionally, 60% of these computer spaces undertake additional actions to reach specific population groups: 38% wishes to reach people in poverty. Results indicate that several population groups are nearly never targeted, namely children, youth and disabled people. A vast number of computer spaces – 13% – are embedded in closed infrastructures and are thereby not open to the general public. This is mainly the case for organizations that work with youngsters in Youth Care. Approximately the same results are shown for courses and training opportunities. Most training facilities are open to the general public and aim at reaching certain disadvantaged groups but do not focus on children and youngsters. On the contrary, nearly 30% of training initiatives focuses on elderly people. This is especially the case for training initiatives that solely focus on teaching computer skills.

Concerning the focus of training opportunities the study reveals that most initiatives – 87% – focus on providing combined courses in which computer and Internet skills are taught. Respectively 6% and 7% focuses exclusively on computer related skills or Internet skills. The focus of courses and training content wise indicate that most initiatives are limited to operational and formal skills. In 93% of the computer courses participants are taught about how to use a mouse and the basic functioning of a computer. Regarding applications most courses focus on teaching Word. More practical issues like for example the installation of soft- and hardware or how to burn CD's is only taught in 7% of the computer courses. The same results are shown at the level of combined courses – computer and Internet. Focus lies in 88% of the

initiatives on learning to use a mouse and the basic functions of a computer. The use of email, a browser and a search engine – mostly Google – is taught in 85% of the combined courses. Only in 33% of the initiatives participants can learn how to download and install software and hardware.

### *Pedagogical approach*

Most initiatives use a combination of a demand and supply driven approach. This means that participants themselves are able to suggest course content, but at the same time initiatives offer certain fixed course material. In 64% of the cases self made course material is used of which 24% consists of custom made course material. Approximately 57% of existing initiatives aim at stimulating participants to participate in follow-up courses. In 43% the offered course is a stand-alone course without focus on additional courses.

Coaching is provided in 90% of the public computer spaces. In the remaining 10% participants are left to themselves when using the computer and the Internet. Most coaches are volunteers that have received an additional training. However, in 20% of the public computer spaces volunteers without additional training do the coaching. For training opportunities this is only 10%. In most training initiatives coaching is given by professional teachers.

The focus of the coaching mainly lies on operational and formal skills. In 32% of the public computer spaces coaches need to give *high* attention to operational skills whereas in one third *some* attention is provided for formal, information and strategic skills. For training initiatives in respectively 70% and 53% of the computer spaces *high* attention is given to operational skills and formal skills. Coaches also provide assistance with regards to the risks of the Internet. Most attention is given to the risks of online communication and issues of online privacy. The least attention is given to sexually tainted material and illegal audiovisual content online or to the awareness of parents about the risks of the Internet for children.

### *Most important assets & problems*

The results of the inventory and the brainstorm session show that current initiatives have three main advantages. Firstly, because of their embedding in local social and cultural organizations there is a very low entry barrier for impoverished groups. Also, the local embedding makes that disadvantaged groups do not have to transcend their common social network hereby overcoming barriers like low levels of self-esteem and self-confidence. Secondly, the use of a specific pedagogical approach – small groups, slow pace, step-by-step course, demand driven, personalized coaching – makes that traditional learning barriers are more easily overcome and impoverished groups are incited to participate in learning activities. Thirdly, the personalized approach used by coaches creates familiarity, decreases dropout rates and signifies an important stimulant for creating positive learning experiences.

At the same time initiatives encounter three major problems. Firstly, at the level of coaching different issues hamper a future development. As most initiatives work with volunteers, availability and training of coaches is a problem. On the one hand professional coaches are often too unaware of the real-life difficulties of impoverished

groups. On the other hand volunteers are more close to the target groups but often lack the necessary pedagogical skills to incite people to learn. Also, because most initiatives work demand driven and develop their proper learning materials a structural effort is needed to develop, maintain and update these learning materials according to the rapid development of the Internet. This is also a problem for the coaches. How can they keep themselves up-to-date with the rapid evolution of the Internet and the continuous submergence of new(er) applications? Secondly, results indicate that the technical maintenance of the equipment appears to be a major problem for current initiatives. They do not have the necessary funds or skills to maintain their computer park up-to-date or to secure it properly against viruses and spam. Thirdly, the lack of structural financial resources is a crucial barrier. The project-based financing mechanisms hamper the further long-term development of existing initiatives in the sense that initiatives have to readdress their focus according to every new project call. Also, initiatives are confronted with a number of structural costs like coaching, the development of learning materials or the maintenance and the renewal of their computer park but are unable to finance all.

## **Conclusion**

It can easily be stated that Flemish civil society organizations have developed a valuable approach to counter the digital exclusion of disadvantaged groups by embedding their actions in existing social structures and by using specific coaching and pedagogical approaches. The vast majority of existing initiatives clearly acts beyond the provision of access to computer and the Internet and additionally foresees in coaching and further digital inclusion by guiding participants to other ICT-related courses. In a way initiatives respond to the increasing complexity of the digital divide by focusing on access, motivation, usage and skills. By working partly demand driven, participants learn the use of applications that are relevant to their daily reality, hereby stimulating adoption and domestication.

Yet, when considering the focus of the coaching the study clearly shows that operational and formal skills are most prominent. Teaching people how to find, critically evaluate and use online information or learning people how to use the Internet in a more strategic way is less common in current initiatives. Question however remains to what extent these small initiatives are able to teach a strategic use of the Internet when working demand driven. Participants come with very particular questions for which they are in need of an answer. This might for example be how to use Facebook or MSN. Participants do not necessarily want to learn how to look, evaluate or critically analyze online information. Furthermore, initiatives themselves do not necessarily aim at teaching informational and strategic skills, as their main goal is to incite people to start using the computer and the Internet. Their primary concern is to create positive learning experiences and make the use of ICT fun.

From a policy point of view however, additional efforts are needed to ensure the sustainability and the future development of existing initiatives. Policy intervention is needed at the level of trainer-trainer courses, technical maintenance and financing mechanisms. Also, stakeholders at a policy level should be more open to collaborate in order to avoid technology determinist approaches that merely focus on access. Also, certain groups like children and youngsters are less reached for the moment even though they are not so digitally skilled as is often presumed. Policy could also

play an important role in this regard by ensuring that formal education facilities follow the evolution that took place regarding the digital divide and foresee in teaching digital literacies as a whole.

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