

Good Practices for Learning 2.0: Promoting Inclusion

An In-depth Study of Eight Learning 2.0 Cases

Authors: Joe Cullen, Clare Cullen, Damian Hayward and Veronique Maes

Editors: Christine Redecker, Margherita Bacigalupo, Kirsti Ala-Mutka and Yves Punie



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European Commission
Joint Research Centre
Institute for Prospective Technological Studies

Contact information

Address: Edificio Expo. c/ Inca Garcilaso, 3. E-41092 Seville (Spain)
E-mail: jrc-ipts-secretariat@ec.europa.eu
Tel.: +34 954488318
Fax: +34 954488300

<http://ipts.jrc.ec.europa.eu/>
<http://www.jrc.ec.europa.eu/>

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Joe Cullen

Clare Cullen

Damian Hayward

Veronique Maes

Preface

This report is part of the research project “Learning 2.0 – the Impact of Web 2.0 Innovations on Education and Training in Europe”,¹ launched by the Institute for Prospective Technological Studies (IPTS)² in collaboration with the European Commission Directorate General Education and Culture (DG EAC) at the beginning of 2008. The project aims to gather evidence on the take up of social computing by European Education and Training (E&T) institutions, in order to understand the impact of this phenomenon on innovations in educational practice and its potential for a more inclusive European knowledge society. The project also sets out to identify challenges and bottlenecks so as to devise policy options for European decision makers.

The methodological framework for the Learning 2.0 project includes desk-based research using available studies, reports and statistics;³ a stakeholder consultation⁴ which served to set up a database comprising 250 Learning 2.0 projects;⁵ the in-depth study of 8 exemplary cases to assess the potential of Learning 2.0 for promoting innovation; the in-depth study of 8 cases to assess its potential for promoting the inclusion of groups at risk of exclusion from the knowledge society; and a validation workshop⁶ in which 20 external experts reviewed the research results.

This report presents the results of the in-depth study of 8 cases, where the use of social computing is a means of offering lifelong learning opportunities to groups at risk of exclusion. The case assessment examines impacts and outcomes, factors for failure and success, as well as obstacles and barriers, in order to assess the potential of Learning 2.0 for promoting social inclusion.

The results of this study were presented at the validation workshop and will feed into the final report of the Learning 2.0 project. They also contribute to continuing previous work conducted in the IS Unit at IPTS,⁷ in particular the recently concluded IPTS “Exploratory Research on Social Computing” (ERoSC) and the IPTS vision on future “Learning Spaces”, models for future learning in the Knowledge Society, where technologies mediate new participative and flexible opportunities for learning.

¹ For more information see: <http://is.jrc.ec.europa.eu/pages/Learning-2.0.html>.

² The Institute for Prospective Technological Studies (IPTS) is one of the seven research institutes that make up the European Commission's Joint Research Centre.

³ Cf. Redecker (2009). “Review of Learning 2.0 Practices: Study on the Impact of Web 2.0 Innovations on Education and Training in Europe”, JRC publications EUR 23664 EN, <http://ipts.jrc.ec.europa.eu/publications/pub.cfm?id=2059>.

⁴ Cf. <http://ec.europa.eu/yourvoice/ipm/forms/dispatch?form=Learning2>.

⁵ Cf. Redecker (ed.) (2009). “Learning 2.0: Case Database”, JRC publications EUR 23664 EN, <http://ipts.jrc.ec.europa.eu/publications/pub.cfm?id=2461>.

⁶ For the workshop report see: Ala-Mutka et al. (2009). “Learning 2.0: The Impact of Web2.0 Innovation on Education and Training in Europe”. JRC publications EUR 23786 EN, <http://ipts.jrc.ec.europa.eu/publications/pub.cfm?id=2139>.

⁷ For more information see: <http://is.jrc.ec.europa.eu/pages/EAP/eLearning.html> and <http://is.jrc.ec.europa.eu/pages/EAP/eS.html>.

Executive Summary

Social computing applications are extremely versatile and offer flexible and dynamic learning opportunities that are often more appealing and engaging than traditional learning arrangements. Their potential for attracting and (re-)engaging learners who are at risk of exclusion from the knowledge society is therefore considerable. The current study investigates in-depth eight Learning 2.0 initiatives targeted at learners at risk of exclusion from the knowledge-based society.

Target groups. While the cases involve a wide spectrum of learners – encompassing older people, young people who are ‘hard to reach’, ethnic minorities, unemployed and people from deprived social backgrounds – two target groups stand out. These are, firstly, young people, who were involved in six of the eight cases analysed, and people with disabilities or medical conditions, targeted in four of the eight cases. Innovative learning approaches using Web 2.0 are being promoted across different educational institutional settings, including formal (ALPEUNED, BREAKOUT), informal (AT Wiki, Conecta Joven) settings as well as initiatives which bring a virtual ‘non-formal’ institutional paradigm to what are essentially closed educational settings (Schome, Notschool, Mundo de Estrellas, MOSEP).

Across all cases, the specific needs of the target groups studied revolved around gaining access to learning opportunities. Thus, a common objective across all cases studied is to facilitate the physical accessibility to learning opportunities, increase engagement in learning opportunities and promote social inclusion. The general focus on supporting participation in learning (Notschool, Schome, ALPEUNED, Mundo de Estrellas) and on addressing issues around low ICT use (Conecta Joven, MOSEP, AT Wiki) highlight the extent to which social inclusion is currently being linked, on the one hand, to engaging the ‘hard to reach’ in learning, and, on the other, to promoting digital literacy.

Technological solutions. A wide range of Web 2.0 tools are used to support inclusion. The cases reflect both relatively ‘low tech’ technical solutions, based primarily on discussion platforms, but also involve sophisticated technical platforms, such as immersive technologies and games in combination with tools like podcasts, blogs and social networking. There is strong evidence of positive outcomes, for both learning and inclusion, associated with the use of Learning 2.0. These outcomes are, however, independent of the level of sophistication of the tools employed.

Outcomes. In line with the objective of promoting *access* to learning and employment opportunities, the main outcomes of the projects studied are, on the one hand, the active educational and social *engagement* of participants, and, on the other, increases in the level of *skills and competences*.

There is strong evidence to suggest that Learning 2.0 tools have the capacity to develop and support ‘basic’ digital literacy, ‘higher level’ e-skills, as well as social and transversal skills, which contribute to opening up labour market opportunities. Across the board, participation in the initiatives studied lead to improvements in basic digital literacy. However, the depth and quality of the skills acquired varies significantly in terms of factors like the extent to which digital literacy is a key objective of the initiative, users’ existing levels of digital literacy, the governance structures and power dynamics within the initia-

tive, and the availability and quality of mentors and tutors. The more sophisticated the applications used, the more elaborated the digital skills acquired.

The case assessment shows that Learning 2.0 approaches are also associated with positive outcomes in developing personal skills like self-confidence, and social skills like team-working and time management. However, there are some indications that existing ‘skills gaps’ amongst learners in Web 2.0-rich environments could contribute to increasing skills gaps between learners who are computer-literate and those who are not, and, in turn, further feelings of exclusion from learning.

While many projects succeeded in making learning opportunities accessible and raising participants' engagement and motivation, active participation rates vary significantly across cases. In the BREAKOUT case, for example, the utilisation of the website by professionals working in drugs and young people's services was disappointingly low. However, participation rates are not always a reliable indicator for the impact or success of an initiative. Although, for example, only 10% of the 4,000 disabled students at the Spanish Open University were active participants in the ALPEUNED initiative, it represents in many respects a ‘success’ story, because it succeeded in making new learning opportunities available to disabled students, improved their social integration and gave them a voice within a community of learners. Participation and utilisation seem to be linked to factors like the learning and inclusion objectives of the initiative; the scale of the initiative; the kind of Web 2.0 tools used, their complexity and their perceived attractiveness; the quantity and quality of human support available; and the appropriateness of the pedagogic approach implemented.

In some cases, e.g. Notschool, it could be shown that, at least for some participants, the initiative proved to be a stepping stone for further learning, training and/or employment opportunities. However, given the novelty of Learning 2.0 approaches, most of the projects are too recent to be evaluated in terms of their sustainability.

Innovation. Many examples of *pedagogic innovation* could be identified – particularly new roles of learners and teachers in the learning process, based on the co-production of knowledge, using an open pedagogy model. What is innovative about the cases presented is not primarily the fact that they employ Web 2.0 tools, but the way in which technologies are used in innovative practices supporting collaboration and social networking. In all cases, teacher-learner relationships have been replaced by more collaborative roles. Teachers become ‘mentors’ or ‘learning companions’ who facilitate independent learning and peer assessment, while learners take control of their learning processes.

Moreover, the case assessment indicates that Web 2.0 tools can be used to create learning environments which open up spaces to develop creativity and collaboration and which are appealing to learners who find it difficult to flourish in conventional learning environments. Web 2.0 technologies further support inclusion through promoting empowerment, self-esteem and confidence-building. Evidence suggests that Web 2.0 can expand learning horizons and engage learners in rich content environments.

There are a number of examples of good practices that can be transferred to more conventional educational settings, for example Notschool's constructivist pedagogical model, MOSEP's use of ‘learning companions’ or Schome's use of ‘virtual field trips’ to provide rich and creative learning environments for students.

The changing roles of teachers, learners and peers also have a profound impact on the organisational culture, promoting *organisational innovation*. For example, by enabling disabled students to voice their ideas concerning learning material and administrative procedures in the ALPEUNED initiative, has changed how disability is approached within the Spanish Open University. Moreover, traditional boundaries between school and other environments – particularly home and the family – are overcome by the creation of virtual learning environments, independent of place and time.

Barriers. All of the examples studied experienced challenges of different kinds and with varying degrees of severity. The main barriers to positive inclusion encompass technical problems, motivation and engagement, digital skills, accreditation and funding. Additional challenges arise from existing power structures, which are resistant to change and equality.

Technological problems were common across the board. Some technical problems were identified with more complex tools, like virtual worlds, and outdated soft- and hardware, others with interoperability issues. Motivational and engagement problems arise in all phases of the projects. In the first place, overcoming initial resistance to participation is a huge obstacle, given that excluded groups are typically ‘hard to reach’ and have previous negative experiences of learning and, in some cases, of technology. However, retaining a critical mass of users and addressing power dynamics that militate against the active participation of certain kinds of users, proved to be equally challenging.

Digital literacy, if not addressed, can endanger the successful deployment of innovative social computing tools. On the one hand, the more sophisticated applications – particularly the podcasting and weblog functions – were seen to be too complex and too time-consuming by some learners. However, simple tasks – like logging in – also proved challenging in some cases, in particular when accessing programmes involved several steps and/or visual representations that the learners were not used to.

The cases studied show that Learning 2.0 environments can open up opportunities for the ‘hard to teach’ to engage in creative and self-paced learning. However, in a world of prevailing educational standards, it remains difficult for learners to gain formal recognition for their achievements. Moreover, organisational problems arise with the changes in the organisational culture of the educational enterprise associated with the introduction of new types of learning and teaching role, moving from a transmissive to a collaborative learning and teaching mode.

Finally, financial problems arose in all cases, ranging from acquiring initial start up funding through costs of developing and implementing a large scale infrastructure, to developing and maintaining an effective sustainability plan that enables the initiative to continue.

Success factors. Key mediating factors in realising successful learning and inclusion outcomes – i.e. an increase in skills and competences and a fruitful participation and engagement in learning opportunities – comprise: existing levels of basic digital literacy; the cultural and social mix of participating learners; and the presence and quality of support available from other sources, for example family and peers. Participants’ profiles, group interaction and social support are key mediating factors in realising successful learning and inclusion outcomes. Similarly, the commitment and motivation at the human

interface level and an organisational network of support made the projects' objectives feasible and sustainable. Equally, organisational buy-in – particular from professionals and senior management – is crucial for success. Strong partnerships and associated financial backing, proved to be essential for the success of the initiatives. Existing power dynamics – for example, those between computer-literate and non-literate – can not only reduce the positive impacts of Learning 2.0 for users but also increase social exclusion for the vulnerable.

Pedagogic models and approaches that are consistent with users' skill levels and interest and which support the technical strategies and tools adopted were key to the success of the projects studied. The development and implementation of new forms of collaborative learning roles significantly contributed to successfully engaging hard to reach groups in productive learning experiences. One of the key findings in this area is that positive outcomes are not necessarily linked to the richness of the Web 2.0 technologies on offer. Although media-rich environments show positive learning gains for participants, and promote their active educational, social and psychological re-engagement, low-tech environments show equally positive results. The key factors promoting positive learning outcomes appear to be how well the following fit together: the skills, needs and expectations of users; the technological and pedagogic choices made and the availability of effective support roles like mentors and 'learning companions'.

Overall conclusions. There is strong evidence of positive outcomes, for both learning and inclusion, associated with the use of Learning 2.0, indicated by the improved accessibility and availability of learning opportunities for the hard to reach, a greater motivation and engagement when participating in learning, a general improvement of participants' skills and competences, and positive effects on social integration. The key factor supporting these positive effects appear to be how well the needs of users and the technological and pedagogic choices made, and the availability of effective support fit together. Key mediating factors in realising successful learning and inclusion outcomes are existing levels of basic digital literacy, and the cultural and social mix of participating learners. Unfavourable power dynamics can offset positive impacts.

Learning 2.0 environments involving innovative pedagogic approaches, like open pedagogy, open up opportunities for the 'hard to teach' to engage in creative and self-paced learning. However, accrediting any achievement gained causes problems in a world of prevailing educational standards, and there is a need for more effort to develop accreditation and standards procedures and protocols for Learning 2.0 that can help bridge gaps between it and the conventional education establishment.

Strong partnerships, combined with necessary levels of sustainable funding, are crucial in supporting the success of Learning 2.0 initiatives. There is a need for further research to gather the evidence on cost-effectiveness of Learning 2.0 in order to feed into both future business models and policy initiatives designed to promote its further development. This work also needs to consider how low cost solutions and open source technologies can contribute to developing Learning 2.0.

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List of Acronyms

A-Level – Advanced Level (secondary school qualification, UK)
APL - accreditation of prior learning
AT – Assistive Technology
AUP - Acceptable Use Policy
BECTA – UK Government agency promoting the use of information and communications technology
bliki – combination of a weblog and a wiki
CEO – Chief Executive Officer
CPD - Continuous Professional Development
CREA - Centre of Research and Practices that Overcome Inequalities, University of Barcelona
CV – curriculum vitae
DfES – Department for Education and Skills (UK)
dotLRN – open source learning system developed at Massachusetts University of Technology
EC – European Commission
EROSC - Exploratory Research on the Socio-Economic Impacts of Social Computing (research programme carried out by IPTS)
FAQs – frequently asked questions
GCSEs – General Certificate of Secondary Education (UK)
GOAL - socially disadvantaged or ethnic minority backgrounds who are currently under-represented in higher education (UK)
GUI – graphic user interface
ICT – information and communication technologies
IMS-LD – IMS Learning Design Specification (generic language to support pedagogies in online learning)
IMS-QTI – IMS Question and Test Interoperability specification (a standard format for the representation of assessment content and results)
IPTS - Institute for Prospective Technological Research (one of the European Commission's research centres, located in Seville)
ISDN – integrated services digital network (a telephone system network)
IST - Information Society Technologies programme (research and technology development programme funded by European Commission)
LEA – Local Education Authority (UK)
NAGTY - National Association for Gifted and Talented Youth (UK)
NEETS – people not in education, employment or training (UK).
NGO – non governmental organisation
NVQ – National Vocational Qualification (UK)
OECD – Organisation for Economic Co-operation and Development
PC – personal computer
prims - Second Life 3D primitive object whose shape is determined by a texture
PRUs - Pupil Referral Units (for students who are difficult to teach)
QCA - Qualification and Curriculum Authority (UK)
RSS - Really Simple Syndication (a means of directly sending content updates)
Schomers - people using Schome Park (Schome Parkers)

SCORM – Sharable Content Object Reference Model (a collection of standards and specifications for web-based e-learning)
SSPA – Andalusia Public Health Service
STD – sexually transmitted disease
TT – Technology Transfer
UKSC – UK satellite competition
UNED - Spanish National University for Distance Learning
VET - Vocational Education and Training
WAI WCAG 1.0 - Web Content Accessibility Guidelines, 1.0
WC3 – the World Wide Web Consortium
WWF – World Wildlife Fund
WYSIWYG – what you see is what you get (a computer user interface)
YOTs - Youth Offending Teams (UK local authority agencies responsible for young people at risk of offending)

1. Introduction

1.1 Scope of this report

This report presents the results of the second part of the study ‘Good Practices for Learning 2.0’. The main objective of the study as a whole is to investigate the potential of Learning 2.0 to support innovation and promote the inclusion of groups at risk of exclusion from society. The study is comprised of two sets of case studies, the first of which involves an in-depth study of eight cases of the use of social computing for learning, identifying factors for failure and success with the aim of assessing good practice and the impact of Learning 2.0 on innovation. In parallel, the second set of case studies involves an in-depth study of eight cases of using social computing to offer lifelong learning opportunities to groups at risk of exclusion, including ethnic minorities, early school leavers, older people. This report covers this latter element – the ‘inclusion’ aspect of the study.

1.2 Background and context

1.2.1 The study in the context of IPTS research

This report is part of the research project “Learning 2.0 – the Impact of Web 2.0 Innovations on Education and Training in Europe”,⁸ launched by the Institute for Prospective Technological Studies (IPTS)⁹ in collaboration with the European Commission Directorate General Education and Culture (DG EAC) at the beginning of 2008. The project aims to gather evidence on the take up of social computing by European Education and Training (E&T) institutions, to understand the impact of this phenomenon on innovations in educational practice and its potential for a more inclusive European knowledge society, and to identify challenges and bottlenecks so as to devise policy options for European decision makers.

The ‘Good Practices for Learning 2.0’ study is one of three elements of this project which is comprised of a Literature Review on Learning 2.0 Practices in Europe;¹⁰ the compilation of a database of case examples of Learning 2.0 initiatives via stakeholder consultation,¹¹ and this, the ‘Good Practices for Learning 2.0’ study. The overall ‘Learning 2.0 Study’ in turn is part of a portfolio of projects implemented by staff from the Information Society Unit at the Institute for Prospective Technological Research (IPTS), in particular the recently concluded IPTS “Exploratory Research on Social Computing” (ERoSC)¹²

⁸ Cf. <http://is.jrc.ec.europa.eu/pages/Learning-2.0.html>.

⁹ The Institute for Prospective Technological Studies (IPTS) is one of the seven research institutes that make up the European Commission's Joint Research Centre.

¹⁰ Cf. Redecker (2009). “Review of Learning 2.0 Practices: Study on the Impact of Web 2.0 Innovations on Education and Training in Europe”, JRC publications EUR 23664 EN, <ftp://ftp.jrc.es/pub/EURdoc/JRC49108.pdf>.

¹¹ Cf. <http://ec.europa.eu/yourvoice/ipm/forms/dispatch?form=Learning2>.

¹² Cf. Ala-Mutka, K. (2008). “Social Computing: Study on the Use and Impacts of Collaborative Content”. IPTS Exploratory Research on Social Computing. JRC Scientific and Technical Reports, EUR 23572 EN, <ftp://ftp.jrc.es/pub/EURdoc/JRC47511.pdf>; Cachia, R. (2008). “Social Computing: The Case of Online Social Networking”. IPTS Exploratory Research on Social Computing. JRC Scientific

and the IPTS vision on future “Learning Spaces”, models for future learning in the Knowledge Society, where technologies mediate new participative and flexible opportunities for learning.¹³

1.2.2 The policy background

This work reflects increasing interest in exploring the opportunities offered by ‘Web 2.0’ for supporting innovative ways of learning, especially for those who are ‘hard to reach’ or ‘at risk’ of social exclusion.

The work can be set within the context of a number of current EU and national policy agendas and initiatives, notably the ‘Riga Declaration’ (2006); the Lisbon Declaration on e-inclusion (2007); the recent ‘Active Ageing’ programme launched by the EC; the ‘e-inclusion: be part of it’ initiative and i2010 - a European Information Society for Growth and Employment initiative - as well as the renewed Lisbon agenda and the 2006 ‘Communication on Lifelong Learning’.

These policy actions denote a recognition, for example in the Commission’s ‘2008 Biennial Joint Report on Lifelong Learning’, and in the draft 2008 ‘Joint Progress Report on the Implementation of the Education and Training 2010 Work Programme’¹⁴, that particular action has to be taken to make ICT accessible to groups at risk of exclusion from the knowledge-based society. In its Communication on Media Literacy in the Digital Environment (2007b) the Commission takes note of the fact that due to the increased availability of digital media products and user generated content, there is a need to empower the citizens to “actively us[e] media, through, inter alia, interactive television, use of Internet search engines or participation in virtual communities, and better exploiting the potential of media for entertainment, access to culture, intercultural dialogue, learning and daily-life applications (for instance, through libraries, podcasts)”

1.2.3 Learning, inclusion and Web 2.0

Current state of the art suggests that the expansion of Web 2.0, coupled with convergence in platforms and devices, has significantly increased the capacity for people to engage in opinion-formation, knowledge creation and decision-making. It is suggested that the emergence of Web 3.0 will continue these trends, taking Lifelong Learning from its traditional ‘transmissive’ mode, where learners are to a large extent passive consumers of knowledge, to a ‘transformative’ mode where knowledge is actively co-constructed as

and Technical Reports, EUR 23565 EN, [ftp://ftp.jrc.es/pub/EURdoc/JRC48650.pdf](http://ftp.jrc.es/pub/EURdoc/JRC48650.pdf); Pascu, C. (2008). “An Empirical Analysis of the Creation, Use and Adoption of Social Computing Applications”. IPTS Exploratory Research on Social Computing. JRC Scientific and Technical Reports, EUR 23415 EN, <http://ftp.jrc.es/EURdoc/JRC46431.pdf>; Punie, Y. (2008). “The Socio-economic Impact of Social Computing: Proceedings of a validation and policy options workshop”. JRC publications EUR 23531 EN, [ftp://ftp.jrc.es/pub/EURdoc/JRC46544.pdf](http://ftp.jrc.es/pub/EURdoc/JRC46544.pdf).

¹³ Cf. Punie, Y. and Ala-Mutka, K. (2007). “Future Learning Spaces: new ways of learning and new digital competences to learn”. Nordic Journal of Digital Literacy (Digital Kompetanse), 2 (4) (2007), 210-225; Punie Miller, Riel, Hanne Shapiro and Knud Erik Hilding-Hamann (2008). “School’s Over: Learning Spaces in Europe in 2020: An Imagining Exercise on the Future of Learning”. JRC Publications EUR 23532 EN, [ftp://ftp.jrc.es/pub/EURdoc/JRC47412.pdf](http://ftp.jrc.es/pub/EURdoc/JRC47412.pdf).

¹⁴ Draft 2008 joint progress report of the Council and the Commission on the implementation of the ‘Education & Training 2010 work programme’, SEC(2007) 1484, COM(2007) 703 Final, Brussels

part of everyday life.¹⁵ This shift from transmissive to transformative modes of lifelong learning is associated with the increasing convergence of ICT themselves. Following Jenkins (2006), this part of the 'Good Practices for Learning 2.0' study placed particular emphasis on exploring the use of Learning 2.0 not simply in terms of technical functionalities, but in terms of how Web 2.0 reflects cultural practices. These are driven, on the one hand, by top-down technological and media production and also bottom-up user and consumer activities and creativity.¹⁶ The effects of these emergent 'convergence dynamics' on social relations and on learning are not well understood, and the study paid particular attention to how these complex dynamics provide both opportunities and barriers to learning.

In turn, we were interested in how Learning 2.0 might have an impact on the broader issues around e-accessibility and e-participation. Recent studies show that, despite significant investment by the EU and member states, around 42% of EU citizens are still classified as 'non participants' in the knowledge society (Cullen, 2007; EUROSTAT, 2007). There is evidence (see Facer and Furlong, 2001) to suggest that significant numbers of people remain at the margins of the 'knowledge society' – not least because the complexity and diversity of their lives, and their roles in a 'technologically rich' society, remain poorly understood. There is also increasing concern, and a lack of knowledge, about the roles that new technologies are playing in reinforcing social problems rather than providing opportunities for learning – for example the use of video mobile phones for 'happy slapping'; the glorification on YouTube of knife and gun crime; the use of social networking sites to promote the 'radicalisation' of young people.¹⁷ Another gap in our understanding, which the study aimed to shed light on, is how technologies that on the surface appear to promote greater social interaction and collaboration in Web 2.0 environments can actually engage people in highly individualistic behaviours that undermine learning and citizenship (Turnbull & Muir 2005; Cullen, 2007; Oysermann, Koon & Kemmelmeier, 2007).¹⁸ There is also evidence that they exacerbate existing cultural, educational and social divisions. Danah Boyd (2007), for example, argues that, in the USA, utilisation of social networking technologies reflects complex class, status and educational stratifications in American youth: MySpace is the 'spiritual home' for educational drop-outs - for Latino/Hispanic teens, 'burnouts', 'alternative kids', goths, gangstas - Facebook attracts 'upwardly mobile hegemonic teens'.¹⁹

Moreover, a number of studies have raised issues about whether Web 2.0 is creating additional problems for particular excluded groups, for example people with disabilities; immigrants and people from ethnic minorities. Woodfine et al. (2008) argue that online learning activities raise problems for higher education students with dyslexia and other

¹⁵ Nova Spivak: What is the Semantic Web, Actually?; URL: <http://www.deitel.com>.

¹⁶ Jenkins, H (2006). *Convergence Culture: Where Old and New Media Collide*. New York: New York University Press.

¹⁷ Young People, New Technologies and Political Engagement, *Institute of Advanced Studies, University of Surrey*, 2007; URL: <http://www.ias.surrey.ac.uk/workshops/young/index.php>.

¹⁸ Oysermann, D., Koon H.- M. & Kemmelmeier, M. (2002). Rethinking individualism and collectivism: evaluation of theoretical assumptions and meta analysis. In *Psychological Bulletin*, 2002, 128, 3-72.

¹⁹ Boyd, D (2007). Viewing American class divisions through Facebook and MySpace.

cognitive disabilities, and Fisseler & Bühler (2007) argue that blogs, wikis and other social computing applications pose additional threats to accessibility for disabled people.²⁰

Set against this, however, is a growing body of evidence – albeit drawn mainly from experimental projects – to suggest that Web 2.0 can contribute to positively supporting the needs of excluded groups. In a literature review of current state of the art Redecker (2009) cites numerous examples to support the view that projects using Learning 2.0 strategies have a high potential to re-engage excluded groups in learning. These include initiatives to support learning for young people in hospitals ('Mundo de Estrellas'); the use of Second life to support learning for people with autism and Asperger's Syndrome ('Brigadoon'); initiatives that offer an alternative to traditional education for young people disengaged from classroom learning because of illness, pregnancy, bullying, phobia, travelling, reluctance to learn, disaffection, exclusion ('Notschool') and projects that aim to exploit the advantages of social computing tools to guarantee a representation of minorities through a direct self expression ('Rete G2 seconde generazioni').²¹

Against this background, this study on the potential of Learning 2.0 for groups at risk of social exclusion focuses essentially on 'what works for whom under what circumstances'. As indicated above, this part of the study presents eight cases that use social computing to offer lifelong learning opportunities to groups at risk of exclusion, including ethnic minorities, early school leavers, older people – and the cases also cover some of the examples cited in the Redecker review. The study therefore explicitly places 'learning' at the heart of inclusion. This is consistent with the EU perspective on social inclusion and exclusion, which are defined as follows:

"Social exclusion is a process whereby certain individuals are pushed to the edge of society and prevented from participating fully by virtue of their poverty, or lack of basic competencies and lifelong learning opportunities, or as a result of discrimination. This distances them from job, income and education and training opportunities, as well as social and community networks and activities. They have little access to power and decision-making bodies and thus often feel powerless and unable to take control over the decisions that affect their day to day lives."

*"Social inclusion is a process which ensures that those at risk of poverty and social exclusion gain the opportunities and resources necessary to participate fully in economic, social and cultural life and to enjoy a standard of living and well-being that is considered normal in the society in which they live. It ensures that they have a greater participation in decision making which affects their lives and access to their fundamental rights."*²²

In turn, the study situates inclusion in terms of its linkage to access and use of ICT in general and 'Web 2.0' in particular in order to promote lifelong learning opportunities. This approach is in keeping with the European Commission's perspective on 'e-

²⁰ Woodfine, B. P., M. Baptista Nunes and D.J. Wright (2008). "[Text-based synchronous e-learning and dyslexia: Not necessarily the perfect match!](#)", *Computers & Education*, 50 (3) (2008), 703-717.

²¹ Cf. Redecker (2009). "Review of Learning 2.0 Practices: Study on the Impact of Web 2.0 Innovations on Education and Training in Europe", JRC publications EUR 23664 EN, <http://ftp.jrc.es/pub/EURdoc/JRC49108.pdf>.

²² Definitions from the EC's 2004 Joint Report on Social Inclusion.

inclusion', which is considered as a two-fold issue, related on the one hand to preventing digital exclusion (ensuring that disadvantaged people and disadvantaged groups are not left behind in the development of the information society, through lack of digital literacy, from economic or technical barriers to Internet access, or from a lack of capabilities to use efficiently the new services and facilities linked to information and communication technologies), and on the other to exploit new digital opportunities for better inclusion of socially disadvantaged people or groups, by developing their individual and social capacity and capital.²³

The genre of Web 2.0 or 'social computing' ICT that constitute the main focus of the study refers to the range of digital applications that enable interaction, collaboration and sharing between users and which supports or fosters group interaction (Owen et al., 2006).²⁴ As indicated above, following Smith (2007), we define Web 2.0 as a set of practices rather than any particular list of tools: the use of two or more modes of computer-mediated communication that result in 'community formation'. (Vuorikari, 2007; Owen et al., 2006). In principle, this embraces a wide range of platforms, software and tools – including communication tools to handle capture, storage and presentation of information – including text, audio and video, wikis and blogs – and interactive tools allowing users to communicate in real time (for example phone, NetPhone, videochat; instant messaging). The study also makes reference to social networking models. These can be interpreted as particular configurations of organisational, institutional, cultural and behavioural modes which serve to realise particular sets of user interactions and, ultimately, communication outcomes. For example, social network services allow people to come together online around shared interests, hobbies, or causes – like dating. Other services – like LinkedIn – enable business networking. Social network search engines use social networks to filter search results, for example Friends Reunited. Commercial social networks form communities around particular consumer or producer interests. The Web 2.0 tools, systems and applications investigated in the study encompass the following types:

- *Social Networking services* – internet- or mobile-device-based social spaces designed to facilitate communication, collaboration and content sharing across networks of contacts. They enable users to connect to friends and colleagues, to send mails and instant messages, to blog, to meet new people and to post personal information profiles, which may comprise blogs, photos, videos, images, audio content. Examples include Facebook and MySpace (for social networking/socialising), LinkedIn (for professional networking), Second Life (virtual world) and Elgg (for knowledge accretion and learning). Social networking systems allow users to describe themselves and their interests, implement notions of friends, ranking, and communities.
- *Syndication and notification technologies* – a means of directly sending content updates, typically using a feed reader (or aggregator), relying on protocols called RSS (Really Simple Syndication) and Atom to list changes;

²³ See Commission Staff Working Group 'inclusion revisited', February 2005.

²⁴ Owen, Martin, Lyndsay Grant, Steve Sayers and Keri Facer (2006). *Social software and learning*. Futurelab Opening Education Reports, 2006.

- *Weblogs or blogs* – online public writing environments, which enable a single author or a group of authors to write and publicly display articles, including visual, audio and video content, as well as features such as links to other blogs, information about the author, and comments from readers;
- *Wikis* – websites that allows users to collaboratively add, remove and otherwise edit and change content, usually text. Unlike blogs, wikis generally have a history function, which allows previous versions to be examined, and a rollback function, which restores previous versions. The best-known example is Wikipedia a collaboratively created online encyclopaedia;
- *Tagging, Social Bookmarking and Folksonomies* – these allow recording (bookmarking) of web pages, and tagging with significant words (tags) that describe the pages being recorded. Examples include del.icio.us, furl and Bibsonomy. This process of organising information through user-generated tags has become known as ‘folksonomy’. Folksonomic metadata consists of words that users generate and attach to content;
- *Media-sharing devices* – these store user-contributed media, and allow users to search for and display content. Examples include YouTube (movies), iTunes (podcasts and vodcasts), Flickr (photos), Slideshare (presentations), DeviantArt (art work) and Scribd (documents);
- *Podcasts and Vodcasts* – podcasting is a way in which a listener may conveniently keep up-to-date with recent audio or video content; vodcasts are video versions of podcasts;
- *Virtual and immersive environments* – examples of these are Second life, or similar online 3-D virtual worlds, such as Active Worlds, Entropia Universe, and Dot-soul Cyberpark which provide users with a online game-like 3D digital environment to which users subscribe;
- *Online office and discussion applications* – these are software packages that replicate desktop applications like Microsoft Office or Open Office and include collaborative editing tools that allow learners in different locations to collaboratively edit the same document at the same time. They typically include interactive Discussion Forums to enable users to share comments;
- *Web 2.0 Tools for learning* – some online collaboration applications are especially tailored for educational purposes. For example Moodle is a free software e-learning platform designed to help educators create online courses.

1.3 Structure and contents of the report

As outlined above, the study has been implemented to address current gaps in the knowledge base on ‘Learning 2.0’, in a domain that is rapidly evolving and where opinions diverge on the actual and potential impacts of Web 2.0 for learning and social inclusion. This means that the study has two main purposes – an exploratory and descriptive purpose (intended to make a contribution to expanding the knowledge base on the nature and use of Learning 2.0) and an analytical purpose (intended to contribute to identifying fac-

tors for failure and success and to assess good practice and the impact of Learning 2.0 on social inclusion).

The structure and content of this report reflects these two purposes. On the one hand we provide below ‘narratives’ of each of the eight cases studies, covering aspects like how projects started; how they evolved; what difficulties they faced and how they addressed them. These narratives are situated within the report text, in the form of illustrations and good practice examples, and are also systematically collated and presented in the form of individual case profiles for each example, provided in an Annex to the main text. The analytical dimension of the study is presented below through four main themes, each of which reflects the main objectives of the study and the key research questions addressed.

The first theme is ‘Landscape’ and focuses on the characteristics of the examples of Learning 2.0 systems and approaches aimed at promoting social inclusion analysed in the study and what they represent in terms of ‘visions’ of inclusion. It also focuses on the strategies – including technical and pedagogic choices – adopted to realise these visions. The second theme assesses the main outcomes and impacts associated with the use of Learning 2.0 to support inclusion. Theme three concentrates on the success factors that promote positive outcomes, as well as the barriers to success. The final theme synthesises and integrates the results of the study to provide an overview of the potential contribution of Web 2.0 to support social inclusion. It builds a bridge between the preceding themes by assessing how particular ‘visions’, strategies and approaches link to outcomes and impacts. It attempts to answer the key question – ‘what works, for whom under what conditions’ – and draws conclusions for further policy and research in the field.

The report is set out as follows:

- Following this Introduction, Chapter 2 outlines the methodological approach used in the study, covering the overall approach, the case study selection criteria used, and the research activities carried out;
- Chapters 3 provides an overview of the ‘Landscape of learning for inclusion’ that the cases represent, summarising the key characteristics of the spectrum of configurations of technology, learning and social inclusion;
- Chapters 4 to 11 present each of the eight cases studied. The cases are presented in three sub-sections, as follows:
 - Firstly, the case profile provides a ‘narrative’ of the cases studies, including case characteristics; objectives; target groups and observations on the origins and evolution of cases. This narrative focuses on the strategies the cases use to support inclusion, including the technical and pedagogic models adopted.
 - Secondly, the ‘Outcomes and impacts’ sub-section looks what has been achieved in each case and what hasn’t, in terms of the following criteria: What was the extent and pattern of user involvement in the initiative? In what main ways did participating in the initiative benefit users? What kinds of ICT skills and competences have been supported by the initiative, and did these include ‘higher level’ ICT skills? Did the initiative help users learn other skills? (e.g. ‘soft’ skills like citizenship; self-esteem)? Did the

initiative equip users with skills that will increase their labour market opportunities? What has been the contribution of the initiative to broader social inclusion objectives (e.g. contributing to local community development; social capital)? In what ways did the use of Learning 2.0 contribute to institutional and organisational changes? Overall, to what extent were the intended learning and inclusion outputs, outcomes and impacts of the initiative realised?

- Thirdly, there is a sub-section on ‘Success factors and barriers’ which considers how the features of each case, in particular their approach to inclusion and their learning methods, link to ‘success’, and explores what factors have limited their success in terms of the following criteria: What kinds of problems and obstacles have been experienced and how have these been addressed? Has the initiative created things that were unexpected, or things that have had negative outcomes? What factors have contributed to the success of this initiative and what lessons can be learned?
- Chapter 12 of the report focuses on the contribution of Learning 2.0 to inclusion. It provides a synthesis of the results, discusses ‘what works for whom under what conditions’ and considers what lessons can be drawn for policy and research in the future.

2. Approach and methodology

2.1 Overall approach

The study on the potential to re-connect groups at risk of exclusion focused on assessing the potential of social computing in enabling people who are at risk of being excluded from accessing learning opportunities which could enable them to participate actively in the knowledge-based society. The cases were analysed with a particular focus on identifying the success factors that enable the (re-)integration of the target group for different areas (e.g. e-Skills, socially disengaged, employment, cultural exclusion), investigating which obstacles had to be overcome, which goals were achieved, the factors determining outcomes and how innovation was supported. The study had a particular emphasis on organised learning settings such as Primary and Secondary Education, Vocational Education and Training (VET), Higher Education, Teacher Training as well as on workplace learning and Continuous Professional Development (CPD), although it did cover more broad-based ‘informal’ settings such as community-based initiatives. The cases were analysed in terms of how success and failure factors reflect the following key dimensions:

1. Innovation – examining how far innovative learning approaches and pedagogies are facilitated and supported by particular Learning 2.0 initiatives.
2. Key Competences and Labour Market Skills – exploring whether and in what ways Learning 2.0 initiatives and innovations foster new kinds of e-skills beyond the level of basic computing skills; whether and in what ways such initiatives support ‘soft’ skills, for example cultural awareness, entrepreneurship, citizenship, and whether and in what ways they support new and flexible ways of learning that are particularly suitable for gaining specialised additional knowledge to improve professional skills and adaptation to labour-market opportunities
3. Maturity and Institutional Change – assessing and reflecting on how far the institutional framework of teaching and learning affects and is affected by Learning 2.0, and in particular which changes in the organisational framework of education and training are needed to support Learning 2.0 and which changes are brought about by the use of Learning 2.0.

2.2 Research questions

The key research questions addressed through the study focused on identifying and assessing innovation; outcomes and potential impacts on learning and inclusion, and unforeseen, negative and multiplier effects i.e.:

1. What kinds of innovative learning approaches and pedagogies are facilitated and supported by particular Learning 2.0 initiatives?
2. In what ways do Web 2.0 applications support social inclusion, in terms of, inter alia, motivational factors, accessibility, confidence, increased technical skills?
3. Which specific learning outcomes are associated with the use of Learning 2.0 applications and initiatives?

4. Which specific inclusion outcomes are associated with the use of Learning 2.0 applications and initiatives?
5. Which institutional and organisational changes – for example on organisational cultures, on the educational enterprise – are associated with the use of Web 2.0 applications in lifelong learning and social inclusion?
6. Which unforeseen, negative, additionality and displacement effects are associated with the use of Learning 2.0 applications and initiatives?

Other research questions providing additional input to the study were:

7. What kinds of Learning 2.0 applications are currently being developed and implemented to support lifelong learning and social inclusion?
8. What are their characteristics, in terms of technical configurations; learning scenarios; pedagogic methods; institutional arrangements?
9. What kinds of new digital skills are emerging as a result of the use of Learning 2.0 applications?
10. What other, non-digital key competences for lifelong learning, are being supported by Learning 2.0 applications?
11. In what ways are Learning 2.0 applications equipping users with skills that will increase their labour market opportunities?
12. What examples of good practice can be identified and how can these be used to support future policy and practices in the field?

2.3 Methodology

As stated above, the aim of the case studies is to deepen the understanding of how social computing is being used to support new forms of learning and new ways of supporting inclusion by carrying out in-depth analysis of a set of ‘exemplars’ of Learning 2.0 initiatives. These exemplars reflect particular configurations of technological choices and attributes, learning scenarios, pedagogic models and tools, and institutional arrangements. The overall methodological approach adopted follows accepted models and practices used in case studies (Yin, 2002),²⁵ but incorporates additional models and methods chosen to suit the particular focus of this study – particularly the research questions outlined above – and the environment in which Learning 2.0 initiatives operate. Six of these additional models and methods applied were:

1. Behavioural additionality analysis²⁶ – a method used to measure both individual and aggregate changes in learning and social interaction behaviours, using self-reported measurements;
2. Theory of change analysis²⁷ – an approach used to identify both the explicit and implicit paradigm of change that lies at the heart of an innovation – in other words the transformative model that is embedded within it;

²⁵ See Robert K. Yin (2002).

²⁶ See Georghiou, L., Clarysse B (2006); Georghiou, L., Keenan, M. (2005).

3. Cultural logic analysis²⁸ – a ‘discursive’ approach used to supplement the ‘theory of change’ analysis and aimed at de-constructing the conceptual and theoretical paradigms underlying the initiatives, their ‘vision’ of Lifelong Learning, Learning 2.0 and e-Inclusion and their intended outcomes;
4. Pedagogic audit – a tool for assessing learning outcomes;²⁹
5. Digital skills audit – a method focusing on capturing the extent to which Learning 2.0 applications are developing and supporting e-skills over and beyond the basic ICT skills typically aimed at in conventional digital literacy programmes;
6. Social capacity audit – an instrument aimed at assessing the effects of participation in Learning 2.0 initiatives aimed at promoting social inclusion on promoting individual capacity and social participation.³⁰

2.4 Methodology design and research activities

The case study methodology design is based on five inter-connected stages:

- Logistics
- Positioning and profiling
- Data collection
- Analysis
- Synthesis

Table 1 summarises the objectives of each phase together with the methods and tools used to implement it.

²⁷ See Chen H T (1990); Rossi, P H, Freeman, H E and Lipsey M W (1999).

²⁸ See Habermas, J (1981); Strydom, P. (1990).

²⁹ See as an example the learning skills audit developed by the Australian Flexible Learning Community; URL: http://community.flexiblelearning.net.au/ProfessionalDevelopment/content/article_5531.htm.

³⁰ See Freire, P. (1970); Horten, M. Freire, P (Eds) (1990); Putnam, R. (2000); Blaxter, M., Poland, F. & Curran, M. (2001); Woolcock, M. (2001).

Table 1: Case study design

Phase	Objectives	Methods and Tools
Logistics	Establish protocols for implementing case studies	Case study procedures
	Identify key informants and data sources. Contact key ‘gatekeepers’. Arrange site visit	Logistics audit
Positioning and profiling	Desk research to collect preliminary data on the case	Case profile template
	Situate the case in its cultural and organisational lifeworld	Environmental Audit
Data collection	Collect preliminary data on key research questions with main informant	Key informant Interview schedule
	Collect data generated through utilisation of platform and tools	Guideline for automated data collection
	Collect data on user experiences	Self administered user questionnaire
	Collect in depth data on user experiences	User interview schedule
	Collect group data on user experiences	Focus Group Guidelines
	Observe how the initiative operates on the ground	Observation guideline
	Analyse content produced by the initiative	Content analysis Guideline
Analysis	Assess key outcomes and impacts for individual users	Behavioural additionality analysis template
	Compare intended outcomes with actual outcomes	Theory of change analysis template
	Evaluate the ‘vision’ of the initiative	Cultural logic analysis
	Assess learning outcomes	Pedagogic audit
	Assess innovative e-skills outcomes	Digital skills audit
Synthesis	Integrate the results of the data collection and analysis to answer key research questions	Case Summary template

2.5 Case study selection

Eight cases were selected for in-depth analysis. The cases are briefly described and summarised in Section 3, Table 3 below. The selection of cases reflected the following priorities:

1. *Different Learning Settings* – the cases proposed include formal and non-formal learning settings; different target groups, in particular ‘at risk’ and ‘hard to reach’ groups; training situations (i.e. workplace, at home; distance or face-to-face), training needs (i.e. general, vocational, leisure; re-skilling, up-skilling) and interactions (i.e.

learner-teacher, learner-learner, teacher-teacher), organised learning (i.e. in schools, universities, training centres);

2. *Different Social Computing Applications* – the case proposed include a variety of uses of social computing applications in learning contexts, involving wikis, blogs, podcasts, social bookmarking, editing and networking tools, virtual realities/immersive technologies, as well as networking, sharing, reviewing, commenting, collaborative knowledge creation, editing or publishing;
3. *Maturity and Potential of the Initiative* – the cases include initiatives that provide examples of sustainable development;
4. *Geographical Distribution* – the cases proposed reflect a range of different geographical locations and cultural environments.

The procedure adopted for case study selection was as follows:

1. A list of ‘preferred cases’ was compiled by the contractors, incorporating the feedback received from IPTS.
2. An additional list of four ‘substitute’ cases for was compiled by the contractors.
3. An appraisal of the ‘preferred list’ was undertaken. The appraisal covered: i) verification of the ‘Web 2.0’ technologies used; ii) verification that the case example is still ‘live’ or that research data can be captured, iii) verification that each case reflects a genuine ‘community of collaborators/learners’; iv) an appraisal of the richness i.e. quality and quantity of data potentially available to the research team, including an assessment of the accessibility of the case – particularly the extent to which the views of users could be captured; v) an assessment, and initial classification, of the type of learning outcomes provided by the case; vi) an assessment of the degree and nature of potential difficulty involved in implementing the case study.

2.6 Data collected and analysed

As noted above, the study approach incorporates a multi-methodological design involving ‘triangulation’ – i.e. the use of different data collection methods (quantitative and qualitative) involving a diverse range of actors that consider each of the examples from different perspectives. As a result, data collection varies from case to case in terms of the type of data collected, the range of actors represented, the balance between ‘primary’ and ‘secondary’ data. However, the case study procedure involved synthesising and interpreting the results using a common template in order to promote standardisation and support cross-case comparisons. Table 2 summarises the data collection process for each case, and gives an indication of the data sources used, the numbers of participants involved in the data collection and the size and quality of the evidence base.

Table 2: Data collection summary

Case No.	Name	On line data	Key Inter-View	Focus Group	SAQ	Other Inter-view	Observation	Content Analysis
1	Notschool	✓	2	-	-	1	-	✓
2	Assistive Technology Wiki	✓	2	-	8	-	-	✓
3	Mundo de Estrellas	✓	1	1	56	12	2	✓
4	ALPEUNED	-	1	-	-	-	-	✓
5	Conecta Joven	✓	2	-	-	-	-	✓
6	MOSEP	✓	1		10	1	-	✓
7	Schome Park	✓	1		6	-	-	✓
8	BREAKOUT	✓	6	2	42	1	4	✓
TOT			16	3	122	15	6	

As Table 2 shows, 16 key informant interviews – mainly with project Directors and co-ordinators - and 122 SAQ's in total were carried out, together with 15 interviews with other project participants – covering users, mentors, learning providers and technical staff. Three focus groups were carried out, one in Mundo de Estrellas with 6 technical staff, and two in BREAKOUT, with young people's service commissioners (15 members) and drugs outreach workers (10 members).

On-line data analysis was carried out in all cases except ALPEUNED, and covered utilisation statistics and content production in blogs, wikis and other Web 2.0 tools.

Observation was carried out in Mundo de Estrellas – visit to the main participating hospital Virgen del Rocío, Seville and to Andalucía Department of Health – and in BREAKOUT – four workshops with young people.

Content analysis covered a wide range of material, including website material, promotional literature, evaluation reports, technical reports, video clips, user surveys, slideshow presentation material, wiki text, and blogs.

Details of the data collected and analysed is presented below for each case, and details of the data provided to IPTS are presented in an Annex to this report.

3. The landscape of Learning 2.0 for social inclusion

3.1 Introduction

This part of the report focuses on the characteristics of the examples of Learning 2.0 systems and approaches aimed at promoting social inclusion covered in the study. In the first part of this chapter we provide an overview of the cases selected and analysed, including the kinds of learning and inclusion scenarios promoted, the kinds of Web 2.0 tools adopted, the inclusion objectives pursued and the target groups involved. This is followed by a detailed set of case-by-case ‘narratives’ of the initiatives covered in the study. The Chapter concludes with some observations on what the cases tell us about the evolving landscape of Learning 2.0 for inclusion.

3.2 Overview of the cases

Table 3 on the next page provides a brief summary of the main features of the eight inclusion cases that were studied.

Table 3: Characteristics of the inclusion cases

No	Name/website	Brief description
1	Notschool http://www.notschool.net	Alternative on-line school for drop-outs – including students with phobias. 70% students from inner city areas with high crime and other social pathologies. Asynchronous learning platform using Firstclass. Constructivist pedagogic model involving researchers-mentors-experts-buddies. Learning materials collaborative and peer-produced – 150 courses provided, blending traditional with unconventional learning.
2	Assistive Technology Wiki http://abilitynet.wetpaint.com	Supports knowledge creation about assistive technologies. Addresses low level of ICT use among disabled people. Uses wiki – free ‘wetpaint’ platform, Moodle for courses and YouTube to compile video database on products, discussion forum to share learning. Adopts ‘routes of desire’ pedagogic model aimed at directing users to material that is most useful for them.
3	Mundo de Estrellas http://www.juntadeandalucia.es/servicioandaluzdesalud/principal/documentosAcc.asp?pagina=gr_sabermas_yademas1	Aimed at young people in hospital, their carers and family – 11,300 young people involved. Integrates formal learning, recreational learning, normalisation of illness through shared stories. Uses interactive games, text, video, interactive forum.
4	ALPEUNED http://adenu.ia.uned.es/alpe/	Involves 480 students with disabilities from Spanish Open University. Supports peer counselling, provides a news service, and coordinates user involvement in related research projects. Applies low level Web 2.0 via interactive forum and peer counselling.
5	Conecta Joven http://www.conectajoven.org	Overall, provides e-skills for a wide range of at risk and excluded groups in 23 telecentres in Spain. The Web 2.0 tools are aimed at trainers and motivators who support end users. Incorporates an inter-generational learning model, supporting collaborative content generation and good practice sharing using social networking; ning; blogs and an interactive Forum.
6	MOSEP http://www.mosep.org	‘More self-esteem with my e-portfolio’ targets early school leavers by improving the skills and qualifications of their teachers and career counsellors. Integrates Wiki, Moodle, FlashMeeting, blogs, Skype, bookmarking, tagging, RSS feeds, Flickr, SlideShare. Pedagogic approach involves tutors as ‘learning companions’ to support self-organised and self-directed learning for end users.
7	Schome Park www.schome.ac.uk/	Initially aimed at ‘gifted’ students who were underperforming in school – including students with autism. Another target group was the National Association for Gifted and Talented Youth’s GOAL cohort – students from socially disadvantaged or ethnic minority backgrounds who are currently underrepresented in higher education. Explores the potential and pitfalls of ‘Teenage Second Life’ as a learning platform. Uses an ‘open pedagogy’ model based on collaborative learning, incorporating Second Life, Machinima, blogs, wikis.
8	BREAKOUT http://www.breakoutproject.odl.org/home	Initiative for offending and drug use prevention, including working with young people ‘at risk’ of offending in schools. Uses a blended e-learning approach, incorporating Web 2.0 with drama and video workshops. Involves a ‘life-swapping’ model based on promoting ‘empathy’, with links to San Quentin prison ‘Death Row’ inmates. Integrates traditional text-based courses with podcasts, blogs, interactive forum, social bookmarking.

As Table 3 shows, the cases reflect a spectrum of target users, technical platforms and Web 2.0 configurations, learning and inclusion settings and scenarios and objectives. Tables 4 to 9 show how these different characteristics are represented by the cases.

Table 4: Target groups addressed

Target Group	Notschool	ATW	Mundo	ALPE	Conecta	MOSEP	Schome	Brkout
Young People	X		X		X	X	X	X
Unemployed					X			
Disabled/Chronically Ill	X	X	X	X				
Ethnic Groups					X		X	X
Older People		X			X			
Poor, Homeless					X			

Table 4 shows the target groups addressed by the cases. Two target groups stand out (highlighted in red). These are, firstly, young people, who were involved in six of the eight cases analysed, and people with disabilities or medical conditions, targeted in four of the eight cases. The majority of the initiatives analysed involved single target groups, or a maximum of two groups. The exception is ‘Conecta Joven’. This case contrasts with the other cases since, unlike the other seven which involve institutional settings (like schools, universities and hospitals), Conecta Joven is a large scale community-based initiative aimed at addressing ‘multiple social exclusion’, typically in locations with high multiple deprivation. As a result, it involves a broad spectrum of participants covering young people, the unemployed, immigrants and ethnic minority groups, older people, homeless people and those with low income.

Table 5: Inclusion objectives

Inclusion Objective	Notschool	ATW	Mundo	ALPE	Conecta	MOSEP	Schome	Brkout
Educational Re-insertion	X					X	X	X
Supporting Disability		X	X	X				
Digital Literacy	X							X
Overcoming Low ICT Use	X	X			X			
Addressing Social Isolation	X	X	X		X		X	X

Table 5 shows the range of inclusion objectives aimed at by the eight cases. In six out of the eight examples, addressing social isolation – for example isolation through ethnicity, exclusion as a result of economic situation – was the primary inclusion objective (highlighted in red). Supporting people with disability was the main objective in three of the cases; four cases focused on supporting participation in learning and three cases addressed issues around low ICT use. In the case of Notschool (highlighted in blue) a range of inclusion objectives was addressed, integrating educational re-insertion, promoting digital literacy, overcoming low ICT use and addressing social isolation.

Table 6: Learning settings

Learning Setting	Notschool	ATW	Mundo	ALPE	Conecta	MOSEP	Schome	Brkout
Secondary School						X		X
Remote School	X		X					
Vocational E&T		X						X
Higher Education				X				
Teacher Training								
Workplace Learning		X			X			
Lifelong / Adult training		X			X			X
Informal Learning		X			X			X
Completely Virtual	X						X	

Table 6 shows the range of learning settings represented by the cases. As Table 6 shows, the cases reflect a wide spectrum of institutional settings, from secondary school to higher education, workplace learning, adult and professional training and informal learning. Three of the cases – Notschool, Mundo de Estrellas and Schome Park – involve entirely virtual learning environments. Half of the examples – particularly Assistive Technology Wiki and BREAKOUT – (highlighted in blue) involve a mix of learning settings. Notschool, Schome Park (virtual schools), MOSEP (early school leavers) Mundo de Estrellas (hospital) and ALPEUNED (higher education) involve single settings.

Table 7: Technical platforms and Web 2.0 tools

Technical Platform	Ntschool	ATW	Mundo	ALPE	Conecta	MOSEP	Schome	Brkout
Wiki		X				X	X	
Blog	X				X	X	X	X
Social Networking	X	X	X	X	X	X	X	X
Podcasts	X							X
Online office/Forum	X		X	X	X	X		X
Social Bookmarking						X		
Personal Learning Environment	X		X	X		X		
Virtual environment			X				X	
VideoConferencing			X					
Co-authoring					X	X		
E-Portfolios						X		
Media sharing		X			X	X	X	X
Moodle		X				X		
Syndication						X		

Table 7 shows the technical platforms and Web 2.0 tools represented by the cases. The Table shows that all of the Web 2.0 applications commonly identified in the literature are used, ranging from social networking tools, through wikis, blogs and podcasts, through to virtual environments (Second Life), media sharing (mainly YouTube) and syndication tools (RSS feeds). The two groups of tools most frequently used (highlighted in red) are social networking and on-line office tools, mainly interactive Discussion Forums. All of the cases involve combinations of different Web 2.0 tools – in the case of MOSEP (highlighted in blue) a total of eleven different Web 2.0 tools.

Table 8: Learning 2.0 activities

Learning 2.0 activities	Ntschool	ATW	Mundo	ALPE	Conecta	MOSEP	Schome	Breakout
Access info		X			X			X
Peer review		X			X			X
Deliver info		X			X			X
Env for learning	X		X				X	X
Create and share knowledge	X	X	X	X	X	X	X	X
Collaborate and interact	X	X	X	X	X	X	X	X

Table 8 displays the learning activities and pedagogic approaches implemented using Learning 2.0 tools. As the Table shows, all cases share two common themes (highlighted in red): using Learning 2.0 to promote co-production and sharing of knowledge and using Learning 2.0 to support collaboration and interaction between users. All of the cases incorporate a range of learning activities, particularly the Assistive Technology Wiki and BREAKOUT (highlighted in blue).

Table 9: Learning Objectives

Objectives	Ntschool	ATW	Mundo	ALPE	Conecta	MOSEP	Schome	Brkout
Access	X	X	X	X		X		X
computer skills		X						X
new learning	X						X	X
self-directed learning	X		X					
increase motivation	X	X				X	X	
Personalisation	X							
Improve results	X			X				
Management					X			
Collaboration		X	X		X			X
Connect with society		X				X	X	X

Table 9 shows the learning objectives addressed by the cases. The Table shows significant variability across the cases in terms of objectives, with the exception of promoting learning accessibility (highlighted in red) which is a common theme addressed by six of the eight cases. All of the cases encompass at least two learning objectives, with Notschool, Assistive Technology Wiki and BREAKOUT addressing a range of objectives embracing accessibility, promoting new forms of learning, increasing motivation for learning, supporting user collaboration and promoting social engagement.

4. Notschool

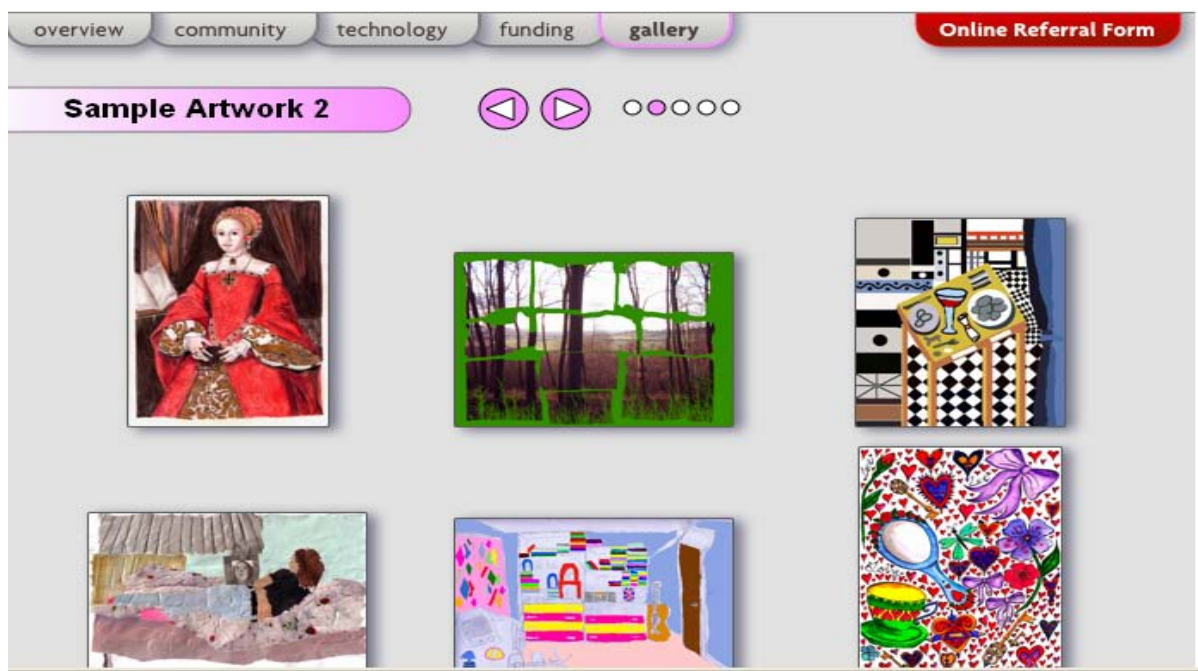


Fig. 4.1: Some examples of artwork produced by Notschool pupils.

4.1 Data collection

Data collection activity	Specification (type of data collected; numbers involved)	Profile of respondents/users (age group, gender, learner type, inclusion type)
On-line data capture	Evaluation reports on utilisation	Involving primary data and feedback from Notschool.net students and their results, as well as from parents, mentors and local teams.
Key informant inter-views	2 key informant interviews	Project director and Technical director of Notschool.
Focus Groups	/	In keeping with its child protection policy, Notschool do not permit interviews with its students.
SAQ	/	In keeping with its child protection policy, Notschool do not permit interviews with its students.
Other interviews	1 mentor interview	ICT and Music expert, working at Notschool for 6 years.
Observation	/	Notschool is an online community.
Content analysis	Learning gains data collection using existing Notschool reports (2001 – 2005)	
Other	8 Reports	

4.2 Case profile

4.2.1 Notschool in a nutshell

Notschool is a virtual online learning community which seeks to provide alternative education for young people who have become disaffected in traditional school environments, cannot participate in school for reasons of pregnancy or ill health, and who have no alternative. For those whom all other schooling options have failed, Notschool provides a platform for re-engaging students in their learning and increasing their motivation to learn. 70% of students come from inner-city LEAs with Behavioural Improvement Programmes, *'which are typically areas with high social deprivation and families in poverty, as well as high rates of crime and truancy.'*³¹ The on-line school community promotes active participation in learning communities, which enables young learners to form and develop their ideas and reengage in the education process, take ownership of their learning and build the confidence and self esteem they need to progress onto college and employment. Notschool describes its core aims as:

- To re-engage teenagers in learning;
- To provide a secure, non-threatening environment without fear of failure;
- To rebuild confidence, self-esteem and social skills;
- To provide a bespoke pathway into further education, life-long learning and further qualifications.

4.2.2 How and why was Notschool started?

Notschool began in 2000 as a DfES commissioned research project to design a new Key Stage 4 curriculum at Ultralab, the learning and technology research centre at Anglia Polytechnic University. The initial focus of the project was content delivery and agencies like The Science Museum and the WWF were asked to develop content. Students were working in isolation on computers at home and retired teachers were employed as tutors to visit them at home. After it became clear that this method wasn't working, the students were brought in and asked how they thought the model could be improved. A more learner-focused online community evolved, using a model designed by the research team based on the views of the young people involved.

The first local authorities covered in the research phase were Essex, Glasgow and Suffolk and the pilot was extended in 2001 to include over 20 local authorities in the next few years. Through this period Ultralab developed a 'successful model for engaging disaffected teenagers',³² which could be disseminated throughout the country and in Ireland and New Zealand.

4.2.3 In what ways has Notschool changed?

The initial focus of the project shifted from being about content delivery to developing a dynamic online learning environment, which the students can take ownership of and contribute to. The technical platform also changed from Oracle's Think to OpenText's

³¹ Notschool.net Evaluation 2005.

³² Inclusion Trust website, <http://www.thecademy.net/inclusiontrust.org>.

FirstClass, which offers a completely secure environment where students can learn through textchat, conferencing, email, noticeboards, making 'homepages' and using other collaborative working tools such as debating polls which help to encourage participation. Equally, FirstClass enables Notschool to monitor the progress of its students more efficiently.

After this model had been established, the two key changes in the way Notschool.net operates have been curriculum and qualifications, both of which have been greatly affected by the policy changes of the UK government. The curriculum has changed largely due to health and safety legislation, which has become more restrictive. Popular subjects, especially practical technology subjects, have become more limited in scope.

Notschool has also changed its view of qualifications. Whilst providing the students 'hard currency' from their Notschool education was initially an 'afterthought',³³ in recent years it has become more of a central focus. The students need recognisable qualifications in order to have equal standing with their non-Notschool peers in the further education and job markets. Traditionally this has been geared very much towards GCSEs and NVQs, for which Notschool has developed its own formally recognised equivalent. Whilst many students are still keen to attain certificates as valuable indications of their progress, many are not able to cope with traditional testing methods or feel unnecessary pressure at the prospect of formal exams. To combat this, Notschool have developed a very sophisticated monitoring system which enables them to track all progress made by students, from their activity around the site, to emails from their tutors as well as their replies (even if unsent), in a process that blends formal and informal learning. Mentors also write weekly reports on a student's progress, which is made easier for Notschool tutor as they are responsible for fewer students. It normally takes a student about three months to become actively involved in Notschool, but from their first tentative steps to a more confident participation in the system at later stages, Notschool can monitor a student's learning journey, '*mapping a learning experience of formal and non-formal skills, of very academic and vocational skills*',³⁴ which can be modeled to fit a set of qualifications on the National Framework and measure hard and soft skills. This ensures that whilst students develop their self-esteem and confidence, they can still achieve. This serves to further motivate them in the crucial early stages.

The government's recent shift in attitude away from traditional qualifications like GCSEs and A-Levels towards a points and credits system is more favourable to learners, and is more in-line with Notschool principles.

4.2.4 How is Notschool funded?

Notschool.net started out as a government funded research project, part-funded by England and part-funded by Scotland. In 2005, it became a self-supporting charity under the Inclusion Trust and has continued to expand.

The average cost of an individual placement in Notschool.net is £5000 in Year 1 and slightly less in Year 2, which is nearly equal to normal school provision and is half as much as the £10,000 required for a Pupil Referral Unit. In England, basic equipment

³³ Jean Johnson, Notschool Director (interview).

³⁴ Jean Johnson, Notschool Director (interview).

costs £750. Notschool uses an expensive broadband provider as this reduces disengagement due to technical difficulties and frustrations with slow download times, etc. In Year 2, equipment costs £500. Mentoring costs are about £1000 and accreditation, experts and visits about another £1000.

Funding for individual places on the program can be provided by a schools inclusion budget, but this is not always the case. As a charity, TheCademy offers some bursaries and there are some government initiatives to offer funding for places.³⁵

4.2.5 Who is involved in Notschool?

The main groups targeted are young people, normally between the ages of 14-16, who have not been able to cope in a traditional school environment due to reasons of sickness, pregnancy/motherhood, phobia, disaffection, exclusion or travelling. Those eligible for Notschool will have been outside of education for an extended period of time and have not responded well to other methods such as home tutoring or pupil referral units.

As Notschool is working with children for whom all alternative forms of education have failed, it is vital that Notschool distances itself from these formats and the focus on being 'not school' is further enhanced by the structural arrangements and semantics. Rather than the traditional student-teacher-headteacher structure, learners are given the role of 'researchers', which gives them more autonomy and responsibility for their own learning, as well as a stake in the successful operation of Notschool as a learning platform. Researchers are guided and supported by 'mentors', who devise a learning plan for each researcher and communicate regularly with them, setting learning goals and targets. Researchers and mentors usually communicate via email, although sometimes researchers may phone mentors (this is normally when a researcher is unused to communicating via email in the early stages of their involvement in the project). There are currently over 130 active mentors and the ratio of mentors:researchers is about 1:6. Notschool have decided that this ratio ensures that researchers are treated as responsible learners by their mentors, rather than simply 'a child in their class'.

Other stakeholders in the learning chain include 'experts', who are specialists in their fields and develop dynamic learning content, and 'buddies', ex-Notschool pupils who choose to remain in the system providing encouragement and advice to younger researchers. The central team regularly monitor student progress. This support network, which was established as the most effective system during the pilot phase, guides pupils through the learning process.

4.2.6 What Learning 2.0 tools and approaches are used?

Notschool's secure FirstClass learning platform allows mentors and researchers to incorporate Web 2.0 technologies into the learning process and students will use and encounter podcasting, blogging, e-portfolios, social networking using their 'homepage' which has similar functions to Myspace and Facebook, stickies, musical stickies, hotlinking (like social bookmarking), sharing videos. They can use any format that they like to record work but traditional methods such as word documents, Powerpoint presentations and emails are still favoured by most students:

³⁵ TheCademy is the physical location of the charity that operates Notschool.

“We use blogging and podcasts, so if they want to podcast their work they can upload it and I can download it with the RSS. This works quite well but we haven’t had so many as it’s quite new to the FirstClass client.” (Mentor, Music and ICT)

Most of the Web 2.0 tools used by young people within the Notschool community are for social networking purposes:

“Lots of young people will use these Web 2.0 tools all the time as part of their social networking and not really recognise this is part of their learning. Everyday they log in they may want to update their homepage, update their blog, they want to update their e-Portfolio, they want to update their podcast.” (Jonny Dyer, Notschool Director)

As every piece of work by researchers is tracked and monitored, students quickly build up a body of work, which can be seen as their e-Portfolio. For some students, the majority of this portfolio evidence will be from their homepage, where they can share items with mentors and peers and pick up feedback. Others work hard to build up their own ‘community spaces’, which they may manage individually or collaboratively with other students. The content of these spaces can be used as evidence for their portfolio.

Once students leave Notschool, the e-Portfolio can be an extremely valuable in helping students to gain acceptance on college placements, work experience or in jobs, giving potential employers and tutors the opportunity to see a detailed multimedia portfolio of informal and formal skills and achievements. This can help students to present themselves with confidence and reduce the stress caused by a formal interview situation. Students are also given iPod shuffles to transport this portfolio to interviews or college via mp3.

However, whilst Learning 2.0 technologies certainly facilitate the teaching and learning process, Notschool are very clear that it is not the technologies themselves that enable learning, but the way in which they are used and managed. It is important to have qualified adults who use them to stimulate learning, rather than focusing learning around the technologies.

4.2.7 How does Notschool promote social inclusion?

Notschool aims to re-engage young people in the learning and enable them to reintegrate into society at the level of further education or employment. As is the case for most Notschool pupils, a traditional school environment is simply not suitable for them and without the Notschool platform as a ‘last resort’, they would ‘slip through’ the system. Notschool works hard to help its students find a style of learning that works for them, based around subjects that interest them and model their qualifications around these interests and skills:

“Every bit of work we do with young people is bespoke to them and in order for that to happen you have to have young people involved in the process; they’re defining where they want to go next, they’re defining how they want to learn.” (Jonny Dyer)

“Our approach is learner-led...we try and get them IT, literacy and numeracy skills and we build those skills around the subjects that they are really interested in. If they are engaged in one area, we can bring in all the strands of learning.” (Mentor)

Through such an approach, Notschool enables users to be empowered by their learning and encourages them to develop their confidence and self-esteem as well as build up technical skills and a set of qualifications (See benefits to users). These facilitate Notschool's main inclusion aims.

The other area where Notschool promotes inclusion is in building up a community and encouraging collaboration. As previously mentioned, students may work together to create 'community spaces' in which they build up a collection of resources on an area of interest to them, for example, skateboarding. This also brings other students into the equation, who are able to leave feedback and contribute to discussion, or learn from the knowledge provided by the community space. Most communities are owned by more than one student and they share the responsibility of running it together. Adult involvement in these communities is kept to a minimum: *"Early on we discovered that if there were too many adults taking part in a community then the youngsters would not respond."* (Mentor)

Through being an online community, there are many benefits for students who have been 'excluded' from other forms of education:

- Students who cannot attend normal school because they find face-to-face learning difficult.
- Students who don't feel comfortable working in groups can benefit from working one-to-one with a mentor and can join in groups when they want to.
- Students who cannot focus for long periods of time can choose when they want to learn.

4.3 Notschool: outcomes and impacts

4.3.1 What was the extent and pattern of user involvement in the initiative?

In total since May 2000, over 5000 students have been a part of Notschool.net. In the academic year 2000/1, 92 students were involved in the project. By the academic year 2004/5 this figure had increased to 933 pupils. On average, students stay at Notschool for about 1-2 years. Over 80% of pupils are from the lowest economic groups. In the UK, the core group of pupils are identified by the school as 'white working-class'.

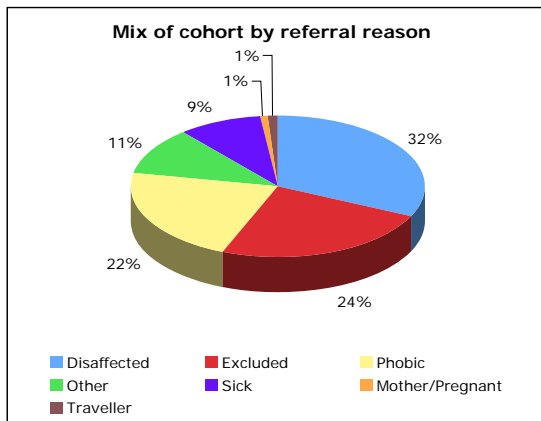


Fig. 4.2: Mix of cohort by referral reason

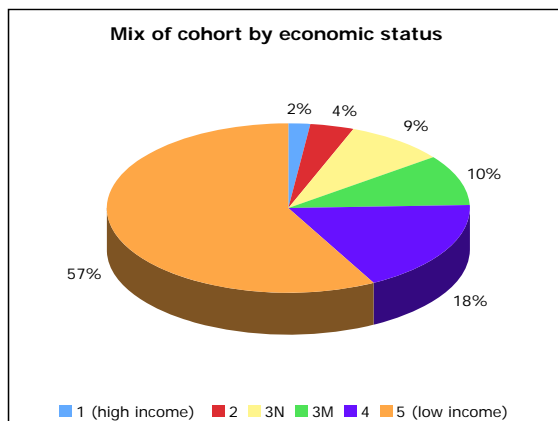


Fig.4.3: Mix of cohort by economic status³⁶

In its pilot stage, Notschool.net had four target inclusion groups: phobic, disruptive (or excluded), ill and pregnant, with a male:female ratio of 50:50. Evaluation shows that of these groups, the phobic and the sick were the most successful in quickly achieving their learning goals, since they were deemed to be willing to learn, yet prevented by circumstance.³⁷ However, after the pilot it was decided that target groups of students should not be categorised. Notschool's current learner profile includes pupils who are unable to attend school for the following reasons: illness (9%), pregnancy or motherhood (1%), phobia (22%), travelling (1%), disaffection (32%), exclusion (24%) and other reasons such as statementing, bullying and reluctance to learn (11%). The male:female ratio has remained the same.

There are over 130 mentors who participate in the Notschool scheme and the ratio of Mentors to researchers is about 1:6. Nearly 75% of mentors are female and they are from different teaching backgrounds, 51.5% are secondary trained, 45.5% are primary trained and 3% are further education trained.³⁸

4.3.2 In what main ways did participating in the initiative benefit users?

Through its informal approach where students have access to learning at any time and can begin to build responsibility for their own learning goals and progress, Notschool has successfully enabled 98% of young learners to re-engage in learning at some level and make observable progress.

Empowerment: Learners take control of their own learning through their 'researcher' role, contributing to a learning community which has a greater significance than their own personal achievements and failings, which increases motivation to learn:

*'The participant is given the role of a "researcher" because they are actively participating in determining what works for generating and sustaining an online learning community.'*³⁹

³⁶ Based on statistical data from Notschool website.

³⁷ Notschool Report (December 2001).

³⁸ Figures from Notschool website.

³⁹ Notschool Evaluation (2005).

Confidence and self-esteem: The non-threatening, confidential and safe environment allows learners to gradually build or rebuild confidence in both their learning abilities and their communication and social skills. Posting information and ideas on community spaces encourages others to learn and discuss their interests and gives researchers the ability to network and make friends, which often translates to increased confidence outside of the notschool.net environment:

“After a few months he decided he would like to run his own community devoted to hard to produce stimulating content which excites responses from other young people. He now feels he is ready to do some work experience.” (Team Leader comment)⁴⁰

Accessibility: As an online community, learning is always accessible and researchers can always make the most of their motivation and inspiration to learn. The use of podcasting and blogging are potentially less laboured learning tasks which can capture the informal element of learning. Creative computer applications such as Garageband and Photoshop further engage learners. 24/7 access to the Web allows students to research learning topics independently via the internet,

‘an investment [otherwise] well beyond the resources of many if not most households involved in the programme’ (Jean Johnson, Director)

Technical skills: Through using computers, digital cameras and printers as their main learning tools, together with high-speed internet connection and bundled software, Notschool researchers quickly develop advanced technical skills.

Broad curriculum and self-directed learning: With over 150 subjects available, the breadth of curriculum and freedom of choice allows students to explore their own interests. Traditional subjects such as written English, Arithmetic and Basic French are complemented by less conventional subject choices such as Car and Motor Mechanics, Hairdressing and Script-Writing for Soap Opera. Students can also build communities based around their own expertise to inspire interest in others and develop their own sub communities within the Notschool environment:

*“As the community has matured, more new areas have been added, frequently by the researchers themselves providing a strong sense of ownership, provoking interest in a way which rekindles the desire to learn.”*⁴¹

Qualifications: It is also recognised that whilst these students need the freedom and space to learn at their own pace and within their own interests, they also need to leave Notschool with ‘hard currency’⁴² which will prepare them for college or employment. Traditional accreditation such as GCSEs and NVQs are often unattainable for Notschool pupils due to the breadth of study involved, or the coursework elements required. Whilst some students still show interest in following these routes, most are keen to achieve through Notschool’s own formal accreditation scheme, which is recognised by the Qualification and Curriculum Authority (QCA):

⁴⁰ Notschool Evaluation (2005), p.21.

⁴¹ Notschool website, <http://www.inclusiontrust.org>.

⁴² Jean Johnson (interview).

- Level 1 is equivalent to a GCSE grade D to G
- Level 2 is equivalent to a GCSE grade A* to C
- Level 3 is equivalent to an A Level

Within this accreditation scheme, 96% of the '04/'05 cohort received at least one Level 1 certificate, 50% achieved at least one Level 2 certificate and 8% achieved at least one Level 3 certificate. This helps students identify their learning progress and situate themselves in a context with non-Notschool peers, as well as help formal external institutions such as colleges and companies to recognise their achievement.

4.3.3 What kinds of ICT skills and competences have been supported by Notschool? Did these include 'higher level' ICT skills?

At the start of the programme, Notschool provides each student with a mini Mac with bundled Mac software including Garageband, iMovie, iPhoto, and Keynote. Specialist applications such as Adobe Photoshop and Cinema 4D can be provided to cater for specific needs. Students also receive a printer, a digital camera and 24/7 ADSL internet access, which enables learners to choose when they learn. These state of the art tools remove many of the potential barriers to learning.

All Notschool students will be fully proficient with basic applications, word processing, email, internet application, as well as keyboard skills. For most students who did not have access to a computer at home before, the progress in ICT skills is normally very fast.

Many students also have the opportunity to develop more advanced digital skills, including podcasting, blogging, digital filmmaking, audio and music files using Garageband and sometimes Cubase for more advanced skills, as well as creating other multimedia and electronic projects. Students are encouraged to establish their own special topics communities within FirstClass and are also responsible for maintain their home pages, often employing tools like stickies, musical stickies, scrolling text, hotlinks, image sequences and embedded videos and soundfiles.

These developments in digital skills encourage researchers to try new things themselves, such as exploring Second Life and bringing the elements that they felt were useful into the Notschool environment.⁴³ Other students put together films, which they post on YouTube. Many are also clearly competent in using social networking sites such as Facebook and Myspace, although this is discouraged by Notschool in the interests of child protection⁴⁴.

Since technology and ICT form the foundation of the researcher's learning environment, any technological problems are dealt with quickly through a 24/7 help and support service. Pupils are encouraged to take responsibility for their equipment and rectify any problems through email/telephone contact with specialist technicians, so they develop technical skills too.

⁴³ Notschool Core Team member.

⁴⁴ Notschool Mentor.



Fig.4.4: Hardware platform, ADSL connection and peripherals given to researchers, as well as the software bundle used (image from Notschool's website)

4.3.4 Did Notschool help users learn other (soft) skills?

Through Notschool and the use of its Learning 2.0 technologies, learners are able to develop a range of 'soft' skills to prepare them for lifelong learning and employment:

- Self-esteem and increased confidence in their abilities;
- Active citizenship through developing communities designed for the use of others, as well as the popular 'buddy' scheme;
- Meta-cognitive skills: information seeking through internet research;
- Socialising and networking skills encouraged through communication with other researchers, as well as a positive learning relationship with mentors and experts;
- Observable improvements in literacy;
- Problem-solving skills.

These skills are demonstrated by students through their involvement in activities in the VLE, through 'real-life' expert days (such as the 'E-baby' day), emails to mentors, individual and collaborative project work, and are closely monitored by Notschool to ensure progress is recorded.

4.3.5 Did Notschool equip users with skills that will increase their labour market opportunities?

One of the core aims of Notschool is equipping learners with the skills and confidence to allow them to progress onto further education or employment. With increased confidence, improvements in literacy and communication skills and formal accreditation, Notschoolers are better equipped to re-enter education or employment at a more independent level. Advanced digital skills and use of e-Portfolios also gives Notschool pupils increased labour market opportunities. They also have the opportunity to collaborate with students from around the world. Of the 2004-05 cohort, 50% of students entered into further education, 26% entered college related employment and 18% entered fulltime employment.

4.3.6 What has been the contribution to broader social inclusion objectives?

By re-engaging young people in their education, Notschool is providing a real alternative for many students who cannot cope in traditional school environments and the standards-driven education system. At a wider level this is helping to:

- Lower the number of young people who are not in education, employment or training (NEETS).
- Raise the profile of learner-focused, learner-driven educational approaches, which is now also recognised through the government's 'personalised learning' agenda.

Community development and the Notschool value cycle: ex-pupils of Notschool often want to give something back, staying on or returning to the community as buddies or experts. Their involvement in the network and their development of/participation in community pages during their time as Notschool pupils encourages them to develop confidence in their own learning as well as recognise the importance of building a successful, collaborative community and learning with others. One student, for example, went on to achieve a first class honours in photography at university, is now studying for a Masters and is also contributing expert content to the Notschool photography area. She has just undergone some training with an exam board to allow her to award certificates to other researchers. Other pupils often stay on in Notschool after completing their studies to volunteer as buddies.

4.3.7 In what ways did the use of Learning 2.0 contribute to institutional and organisational changes?

Learning 2.0 has enabled Notschool to build a successful and effective online learning platform for young learners who could not engage in traditional learning environments. Through switching from Think to FirstClass, Notschool now has a more secure and dynamic platform where students can build homepages including videos, images, photos, stickies, hotlinks, blogs and podcasts alongside word documents.

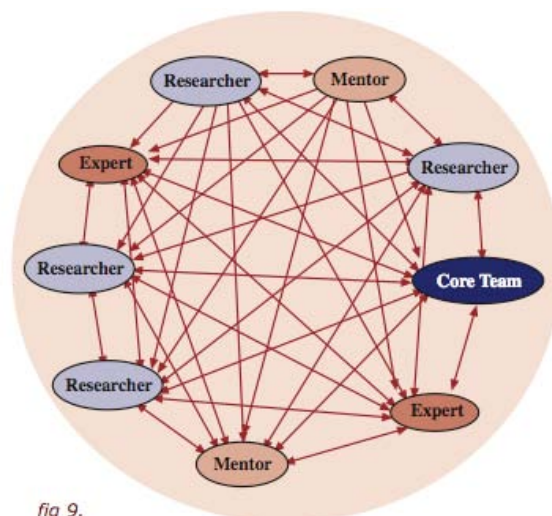


fig 9.

Fig. 4.5: Notschool structure ⁴⁵

The structure of education is much less hierarchical, allowing researchers to take a central role in how their education is organised. There is also much more communication between the key stakeholders to create an efficient feedback loop which facilitates progress and monitoring. The key factor in building this successful community is equality of input into the community. Researchers are taught not only by mentors and experts, but also through peer learning. Equally, researchers can sometimes take the role of ‘mentor’ by building a community where other researchers and mentors may learn from their expertise. This creates a more dynamic, collaborative structure which encourages learning. The success of the ‘mentoring’ approach is illustrated through the popularity of the buddy scheme, where learners feel they can lend their newly found social skills and increased confidence to help other Notschoolers new to the system:

“N. has moved from a very isolated young man to one who has collaborated with two other researchers (from other LEAs) to run their own community. In addition he has asked to become a buddy, after asking how demanding the role was.” (Mentor)⁴⁶

4.3.8 Overall, to what extent were the intended learning and inclusion outputs, outcomes and impacts of Notschool realised?

The Notschool model proved successful for many students with 98% of students making observable progress and achieving some form of qualification. Only a small number of students drop out and this is normally due to incorrect referrals by local authorities.

Notschool has developed a sophisticated monitoring system which can record both formal and informal achievements. Through doing this, they can measure the progress of students who are not ‘obvious’ achievers and help all pupils to build self-esteem and confidence in their own learning. Many students report positive experiences of their time at Notschool. Equally, Notschool’s NVQ equivalent qualifications and the certificates

⁴⁵ Notschool Evaluation Report (December 2001), p.5.

⁴⁶ Notschool Evaluation Report (2005), p. 29.

given to recognise these achievements help learners to formalise their progress and see their ability to learn in a different light.

From including only three local education authorities at the start, in Essex, Glasgow and Suffolk, it is a model which has successfully expanded throughout the UK and to Ireland and New Zealand. Notschool has managed to reduce the per capita cost of the scheme to £5000 in year 1 and £4000 in year 2, which is nearly equal to a placement in a regular school and is half the cost of placing a student in a pupil referral unit.

Staff at Notschool feel that whilst they are achieving their aims, they could do more but feel that they are hindered by the government's 'standards-driven educational policy' which awards funding on the basis of high formal achievement and high attendance records. Staff at Notschool would like to see better ways of working with marginalised students within schools.

4.4 Notschool: success factors and barriers

4.4.1 What kinds of problems and obstacles have been experienced and how have these been addressed?

Recruitment, referrals and funding: The main issues with the Notschool arrangement are problems with recruitment and referral from LEAs. The key intermediary between home and school, the LEA contact person, must be dedicated to following Notschool's innovative and unconventional methods. Inappropriate referrals are sometimes a problem as is securing funding for individual placements from LEAs.

Assessing learning gains: Developing an online community, which is considerably more informal than a traditional school community, also creates difficulties in assessing measurable learning gains and formal accreditation that are recognised by others. This has been addressed by Notschool through their own qualification scheme. However, at school leaving age, Notschool pupils are, in the mainstay, still not equal to their school-educated pupils, where 62% of the population leave school with 5 GCSEs grades A*- C. This is a problem of national attitude and government focus on attainment.

Not a model for all disengaged pupils: It is recognised that many Notschool pupils have an unsuccessful history in traditional education, unable to break out of a cycle of disengagement and non-achievement. In this respect, any steps towards re-engagement in education are considerable learning gains. The fact that 98% of students make observable progress is a testament to the success of the model. However, it must be noted that it is a model which does not work for all disengaged learners. Students who are unsuccessful at Notschool include those in short term care and those who come from extremely dysfunctional families and will receive no support at home.

4.4.2 Has Notschool created things that were unexpected, or things that have had negative outcomes?

There is no evidence to suggest so.

4.4.3 What factors have contributed to the success of Notschool?

The success factors of the initiative can be seen as follows:

- Notschool's **constructivist learning approach**, with bespoke learning programmes for each student and the freedom given to learners to direct their learning in 'routes of desire' and choose topics that interest them.
- The **mentor/researcher/buddy/expert system** and the development of a genuine learning community. This enables researchers to feel as though they are contributing to something 'greater than them' and reaching a wider audience, which is empowering and motivational.
- The use of state-of-the-art **technology** and software and 24/7 access to the community, which empowers learners and removes many of the barriers to learning.

4.4.4 What lessons can be learned?

The lessons that can be learned from this case study are as follows:

- Allowing students to choose their own curriculum and develop content improves motivation to learn and helps collaborative learning as students seek to share interests with others;
- Disengaged students perform better when taken out of a standards-driven school environments as there is no fear of failure or pressure to achieve;
- Virtual Learning Environments such as FirstClass can be used to monitor student progress and record both informal and formal achievements;
- Student-led community spaces and student 'homepages' for displaying work encourage peer assessment;
- Electronic portfolios can assist students in an interview situation by reducing stress and helping students to present themselves, their skills and achievements;
- Web 2.0 technologies are valuable tools for stimulating learning and helping students to work collaboratively, but they need to be managed by qualified teachers in order to be beneficial;
- Many of the success factors of the Notschool model are transferable and could be employed in traditional school environments to help marginalised learners.

5. Assistive Technology Wiki

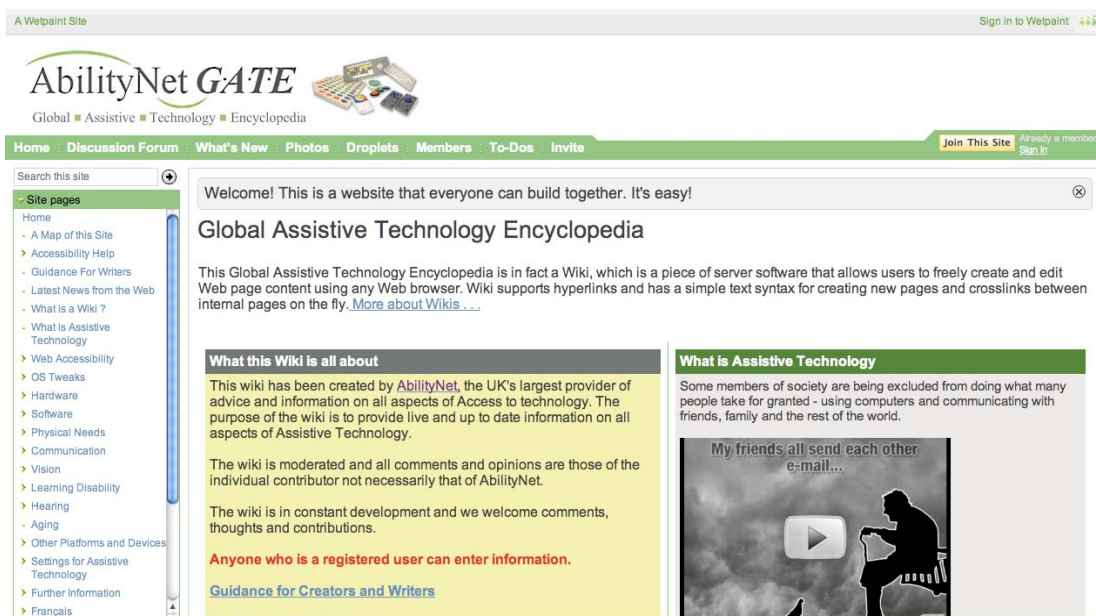


Fig. 5.1: The AbilityNet Assistive Technology Wiki

5.1 Data collection

Data collection activity	Specification (type of data collected; numbers involved)	Profile of respondents/users (age group; gender; learner type; inclusion type)
On-line data capture	<p>Wiki (81 users and 16,000 unique visits by October 2008)</p> <p>The AT Wiki forum (36 threads, 83 posts).</p> <p>The AbilityNet YouTube channel (55 subscribers and 3,333 channel views from January 2007 – October 2008, 32 videos, 31 playlists (from Accessibility and Disability awareness to Sound-Beam and individual devices) with a total of 805 videos)</p> <p>AbilityNet main website and articles</p>	<p>Around 60 active members currently contributing to the Wiki. Most of these are Assistive Technology professionals. A minority are people with disabilities. Also includes therapists; health professionals; parents.</p> <p>(http://abilitynet.wetpaint.com/)</p> <p>The users of the forum are predominantly AbilityNet employees and those working in the assistive technology field.</p> <p>(http://abilitynet.wetpaint.com/)</p> <p>The channel's subscribers are mainly assistive technology professionals.</p> <p>(http://uk.youtube.com/abilitynet)</p>
Key informant interviews	2 key informant interviews	<p>CEO of AbilityNet</p> <p>Director of Development at AbilityNet, AT Wiki creator and co-ordinator</p>
Focus Groups	/	It was not possible to arrange a focus group as the AT Wiki is based online
SAQ	8	Profiles of respondents: 1 carer, 1 Software Developer, 1 Accessibility Consultant, 1 Accessibility Administrator, 4 Technology Providers, including AbilityNet employees.
Content analysis	<p>Forum contributions analysis</p> <p>Wiki analysis; 2 reports; 13 web articles</p>	See above for profile and user information.

5.2 Case profile

5.2.1 The AT Wiki in a nutshell

The Assistive Technology Wiki is an initiative developed and implemented by AbilityNet. AbilityNet is a national UK charity that has been running for over 20 years. Their main mission and objective is to promote better design and diffusion of ICT for people with disabilities, and to support disabled adults and children in using them. They contribute to developing adaptive and assistive technologies to do this. Adaptive technologies supported by AbilityNet include screen magnifiers, on screen keyboards, voice recognition and narrators, and predictive text. However, adaptive technologies are on their own not enough to support people with disabilities – education and skills is the major problem. So AbilityNet deliver online e-learning to get people to learn to use technologies and adaptive systems. This is where the ‘Assistive Technology Wiki’ comes in.

The Wiki aims to provide flexible, up-to-date information on all aspects of assistive technology, including the latest products available. The wiki allows its members to share knowledge and opinion on this information, as well as suggest and discuss new products and services. There are currently 72 members in the AT Wiki community and it is steadily increasing. Most of these are Assistive Technology professionals. A minority are people with disabilities. Users also include therapists, health professionals and parents.

5.2.2 How and why was the AT Wiki started?

The wiki has been under development for around a year and was launched in July 2008. The target user group for the wiki is anyone interested in the needs of disabled people. This includes equipment vendors, charities, public sector agencies and disabled people themselves. The rationale for the wiki comes from problems associated with the fact that the resource base used by AbilityNet – including training courses, information on new products, standards information, disability discrimination act compliance checks – had become static and was not developing as the state of the art evolved.

5.2.3 In what ways has the AT Wiki changed?

The initiative has only been running for two months.

5.2.4 How is the AT Wiki funded?

The funding to start the initiative came internally from AbilityNet. Overall, it is supported by donations (around 20%), government grants, fees earned from services provided, for example disability awareness training for employers, in-kind support from companies. The initiative involves minimal capital and operational costs since ‘wetpaint’ is open source and free to use. The initiative has only recently been launched, so exploitation and sustainability plans are at an early stage.

5.2.5 Who is involved?

The stakeholders and partners involved are mostly vendors of assistive technologies (e.g. Agilent Technologies, British Telecom, Microsoft), disabled people, NGOs supporting disabled people.

5.2.6 What Learning 2.0 tools and approaches are used?

The Wiki is accessed via the AbilityNet Forum. It uses ‘wetpaint’ technology. Wetpaint is free open source wiki technology. It integrates a content developer and editor (‘Easyedit’) to create content and incorporates blogs and discussion forums to enable content to be reviewed. The platform uses embedded YouTube videos that provide illustrations of the latest assistive technologies and how they are used. There are links to the wiki from AbilityNet ‘twitterfeed’. The main innovative aspect of the Assistive Technology Wiki is its pedagogic model, which involves a collaborative knowledge production approach, based on ‘routes of desire’. This involves an ‘open pedagogy’ method – supporting people to find their own routes to learning through different systems and technologies, rather than a ‘didactic’ approach.

5.2.7 How is social inclusion promoted?

The Disability Rights Commission advocates a society ‘where all disabled people can participate fully as equal citizens [... where] this new and powerful technology does not leave [them] behind’⁴⁷. AbilityNet provides easy access to important information, useful tools, invaluable software and training, as well as a network of web users in a similar position, all of which is expanded upon by the AT Wiki. Overall, this blended e-Learning model incorporates as many Web 2.0 technologies as possible, giving previously excluded groups access to the internet and the opportunity to participate in collaborative learning, sharing their knowledge on what ICT technologies work for their disability, which may help other excluded users. This may help reduce disabled people’s isolation.

5.3 Assistive Technology Wiki: outcomes and impacts

5.3.1 What was the extent and pattern of user involvement?

The AT Wiki now has a membership of over 80 users and is steadily expanding. Most of the Wiki members are Assistive Technology professionals, but also includes therapists, health professionals and parents. A minority are people with disabilities. From the results of the Self-Administered-Questionnaire, respondents identified themselves as accessibility consultants, technology providers, some of whom are AbilityNet employees, web accessibility administrators, open source software developers, as well as carers and volunteer workers. Wiki member profiles confirm that the wiki is being used by AbilityNet employees and interns, voluntary and charity workers, employees of other assistive technology organisations or departments, for example BT’s Consumer Affairs and Inclusion Team, software developers, technology writers, IT trainers and consultants and relatives of people who use assistive technology.

From January to October 2008, 81 people have become members of the AT Wiki. Between January and May, the Wiki membership increased and decreased fairly evenly from month to month but since June it has increased steadily, from only 3 members joining in June to 18 new members joining in October.

⁴⁷ The Web: Access and Inclusion for Disabled People, The Disability Rights Commission (2004).

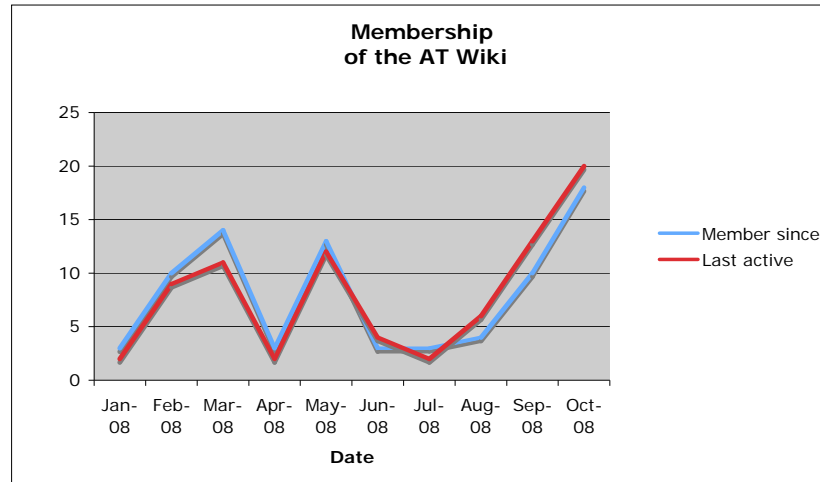


Fig. 5.2: Number of members joining the wiki each month

Using member profile data, it is possible to see that the majority of members join the Wiki and do not immediately edit pages and participate in discussions, but may view content without logging in, as is shown by the strong correlation between members joining and members being ‘last active’.

None of the users who completed the on-line questionnaire (SAQ) considered their main contribution to the wiki to be creating new pages. 50% of respondents thought that their main contribution to the wiki was actively contributing to it, e. g. adding new information to wiki pages, contributing to the forum or “*sharing wiki info with others*”. 38% of respondents felt that they mainly contributed by reading and viewing existing content. 13% of respondents felt that they did not contribute at all. Member profile data reveal that most users of the wiki do not contribute by adding or editing wiki pages, with only 14 out of 81 members making edits or adding information to the wiki. Some of this information may be user profile information, for example adding a photograph or personal details. However, with over 16,000 unique visits to the Wiki, it is most likely that at present the majority of members or guests use the wiki as a traditional information source and do not actively participate in creating content at this stage. This trend reflects larger wikis, for example Wikipedia, where the majority of users are passive in the knowledge production process and whose main ‘contribution’ is reading or viewing existing content.

Since the first few posts in March, the forum has seen a significant increase in the number of new posts and replies to existing threads every month, considering the relatively few members. Since the launch of the wiki to the public in May, there has also been a positive correlation between the number of new posts and replies and the total membership. In October, however, whilst the number of new members increased dramatically, expanding the total membership to 81, forum activity decreased significantly.

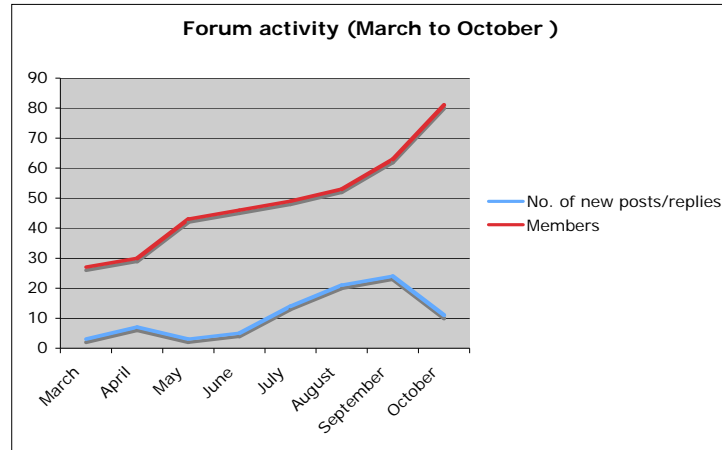


Fig. 5.3: User engagement in the AT wiki forum

Whilst it seems that membership is now steadily increasing, the participation of new members in the forum and wiki is relatively slow to catch up. Most of the forum and wiki content is generated and modified by only a few key members, who have been participants since the wiki's early stages. From the forum contributions analysis it is clear to see that nearly half (44%) of all forum activity is generated by one user, and that just over three quarters (76%) of all forum activity is generated by just three of the wiki members.

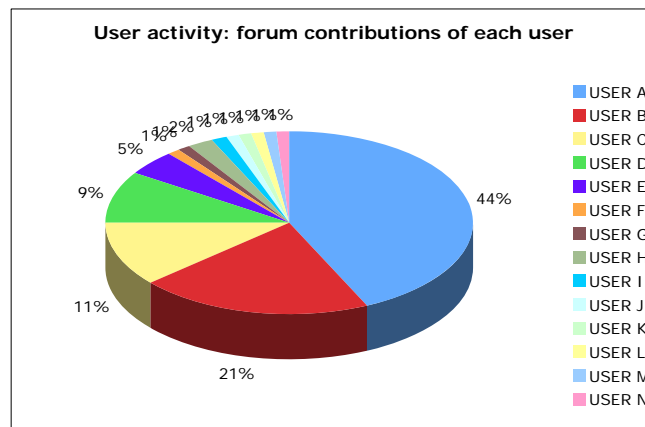


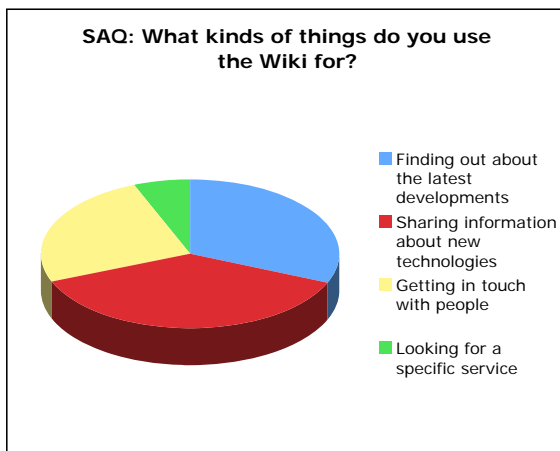
Fig. 5.4: User activity in the AT wiki forum

This result, together with the 16,000 unique user figures, suggests that the Wiki is still being used as a traditional information source for the majority of users, which needs to be addressed by greater involvement of the expanding membership.

5.3.2 In what main ways did participating in the AT Wiki benefit users?

AbilityNet's 'open pedagogy' approach makes the most of the knowledge, expertise and experience of its users, whatever their background (eg. disabled user, healthcare professional, AbilityNet employee), and provides them with a flexible knowledge system that can incorporate many different resources (including other AbilityNet services) to provide a tailored information source and learning experience for each individual user.

From the Self-Administered-Questionnaire, it is evident that the AT Wiki is mainly used to share the latest information on assistive technologies and for networking with other interested parties.



- 75% of respondents use the Wiki to ‘share information about new technologies’
- 62.5% of respondents use the Wiki to ‘find out about the latest developments’
- 50% of respondents use the Wiki for ‘getting in touch with people’
- 13% of respondents use the Wiki to ‘look for a specific service’.

Fig. 5.5: Use of the wiki

Most respondents ‘Strongly agree’ or ‘agree’ that the Wiki:

- helps to develop networks that provide opportunities;
- helps members to feel more involved in the community;
- provides better information.

They also feel that the Wiki is beneficial for:

- “*Getting to know new people*” (*Accessibility Consultant*)
- “*Feeling part of a widespread community*” (*Technology provider*)
- “*Sharing information...creating an information resource*” (*Technology provider*)
- “*Ensure people are aware of Open Source software solutions*” (*Open source technology software developer*)

The AbilityNet AT Wiki offers real value and benefit for users in providing a comprehensive resource on assistive technology, including up-to-date information (ranging from Learning Disabilities to VAT exemptions), a detailed list of FAQs, a discussion option on each page, and a series of fascinating and informative video tutorials and stories. The ‘Products in practice’ section allows members to get information directly from vendors and/or other users of the technologies they are considering. It is incredibly useful for people in exploring all the options and alternatives available to them. Many of these videos are collated by AbilityNet in their dedicated YouTube channel, to address problems of users being able to find and access such information.



Fig. 5.6: 'Products in practice'

5.3.3 What kinds of ICT skills and competences have been supported by the AT Wiki, and did these include 'higher level' ICT skills?

The 'Wetpaint' wiki engine was chosen by AbilityNet as it does not require users to have a high level of digital literacy and is relatively easy to use. Users learn how to create and share content and use social networking functionalities. Members can edit or create wiki pages, post or make replies in the discussion forum, send messages, add friends, invite others and complement each other on interesting or useful posts.

Indirectly, the Wiki may help to develop ICT skills by offering valuable information on developing ICT skills for disabled people through promoting access to advanced technologies.

5.3.4 Did the AT Wiki help users learn other skills (e.g. 'soft' skills like citizenship; self-esteem)?

As the AT Wiki is predominantly used by professionals, improving the 'soft skills' of members is not a key outcome. However, participation in the AT Wiki can have a positive impact on user skills which, through the nature of the wiki environment, are difficult to monitor:

- *Social interaction:* One of the key things about the AT Wiki is its networking potential through information sharing. Socialisation tools are teamed with online knowledge production, allowing members to make new friends and professional acquaintances and help them to feel part of a wider community.

- *Active citizenship*: Active citizenship is also encouraged through sharing information that is valuable to others and can help them to improve their quality of life.
- There is also evidence to suggest that it can help reduced isolation of disabled users.

5.3.5 Did the AT Wiki equip users with skills that will increase their labour market opportunities?

In the UK there are currently 1.2 million disabled people who are available for and want to work, yet 45% of the disabled population of working age are economically inactive⁴⁸. The AT Wiki indirectly helps disabled users to increase their labour market opportunities by supporting access to information on job opportunities. It can be seen as part of a ‘value chain’ that adds value to AbilityNet’s broader objectives and services. AbilityNet focuses particularly on making broadband more accessible because access to broadband creates more employment opportunities for disabled people, since they can work at home. ‘Hot-desking’ creates problems for disabled people because if they go to an unfamiliar work environment they may have problems with in situ equipment, for example, office furniture may need height adjustments. Home is the most effective environment for adaptive technologies. The wiki supports this set of over-arching objectives.

For accessibility consultants, healthcare professionals and users who are not looking for help with a specific disability, the AT Wiki may also help increase labour market opportunities through providing a valuable network of professionals in the same field. Of the SAQ respondents, 50% believed that using the Wiki could contribute to improving job prospects, whilst 38% believed that it was not relevant to the advancement of their career.

The AT Wiki also offers advice for employers seeking to ensure that they meet accessibility standards and support workers with disabilities, as well as preventing disabilities which may happen in the workplace. Raising awareness about such issues will have multiplier effects for the labour market opportunities of people with disabilities.

Employment

Disability and Employment

Most disabled people become disabled when they're at work. The role of AT is to ensure that health problems or disabilities can be overcome so as many as possible can cure, to also work to reduce the health risks associated with IT use that can become disabilities if ignored.

If you ask a room full of people who use computers for work if they've ever experienced any form of discomfort associated with using IT, some 80% say they have.

With 20 years experience helping people use their technology effectively, we still find this a staggering statistic. Clearly the majority, not the minority, of us require some more suitable for our individual needs.

Major research (Forrester 2003) confirmed this. Most people work more productively and with less stress with simple changes to their workstations.

Today, over 90% of new jobs need some IT skills – whether a hand held computer in a garden centre, or a laptop for home workers. So it makes sense for every employer to use comfortably, whether you're a multi-national or self-employed. Preventing health problems that create disabilities is extremely important.

Key issues to consider when implementing Assistive Technology in the workplace

- Space
- Shared resources and networks
- Portable solutions
- Legacy systems and bespoke applications
- Time required for training

Case Studies in Employment

- [Abilitynet case studies](#)
- [Karten Network case studies](#)

Fig. 5.7: The Employment section of the AT

⁴⁸ Labour Force Survey Sept-Dec 2006, UK National Office for Statistics.

5.3.6 What has been the contribution to broader social inclusion objectives?

As the AT Wiki has only been in effect for a few months, it is difficult to assess its contribution to broader social inclusion objectives, but the positive outcomes which are already evident are that it contributes to **raising awareness** of the needs of disabled people and promotes **knowledge sharing** and technical development between AT professionals, leading to better technology solutions for disabled users.

5.3.7 In what ways did the use of Learning 2.0 contribute to institutional and organisational changes?


There is not enough empirical evidence so far. Anecdotal evidence suggests:

- A change in communication behaviours of AbilityNet stakeholders (shift from ‘static’ e-mail to collaborative, using the Wiki and discussion forum to share information);
- An increase in the level of networking between users;
- An improvement in the quality of information that can be provided by AbilityNet, since it incorporates user feedback.

5.3.8 Overall, to what extent were the intended learning and inclusion outputs, outcomes and impacts of the initiative realised?

- **Accessibility and dynamic content:** The Assistive Technology Wiki has successfully developed a dynamic and useful resource database, which delivers awareness-raising information on assistive technologies to an international audience and reduces the limitations of web accessibility. Wetpaint is adaptable and can incorporate assistive technology standards (WC3), so that members with disabilities can also use it as a resource and are not excluded. It is seen as an ‘*excellent resource*’ which can provide better information to all.
- **Sharing information and networking between stakeholders:** For assistive technology stakeholders the AT Wiki is a valuable platform for collating and organising existing information, enabling them to deliver better services to their clients. Moreover, since the Wiki encourages networking between different agencies interested in assistive technologies it creates a pooling of expert knowledge, which in time can be added to by the experiences of disabled people themselves, as well as their relatives and carers. As the Wiki is updated and expanded by this interaction between members, it is able to offer more informed and varied opinion on state-of-the-art solutions:

“The wiki is drawing together expertise from a variety of perspectives and allowing discussion on solutions that previously were only widely available in one state. The ability for increasing numbers of users to assist themselves through the information provided has the capacity to significantly reduce the cost of providing services and intervening to promote inclusive technologies.” (David Banes, E-practice website)



Large button VOIP phone wanted

Aug 27 2008, 5:40 AM EDT

A partially-sighted user needs a large button phone that will work with a Cisco VOIP system, and have all the functionality offered by the phone system. He has extremely limited vision, and currently uses a BT Big Button phone, but this apparently does not allow the transfer of calls etc.

All of the IP phones currently available for use have very small buttons, and functionality based on a small electronic display that he cannot see. A softphone (Cisco IP Communicator) was tried, but this does not work very well with Zoomtext (14x magnification), as the image is grainy and unclear when magnified, and by the time he has navigated around the screen to dial the number the call has timed out.


Is there anything currently available that may be suitable, or any modifications which could be made on the existing Cisco system that might improve matters? The user is registered blind and maybe it would be better to look for a solution that would suit someone with no sight. Anything based on touch (eg, braille) is excluded however, owing to a diabetes related touch sensitivity impairment. Perhaps a speech-based solution if there is one? Any suggestions gratefully received.

Do you find this valuable?

Yes

No

Post reply



RE: Large button VOIP phone wanted

Aug 31 2008, 10:40 AM EDT


I don't know. Did you try asking Cisco? A quick web search indicates the email address to contact would be accessibility@cisco.com -- I am curious to hear if they were any help to you.

Do you find this valuable?

Yes

No

Post reply



RE: Large button VOIP phone wanted

Aug 31 2008, 10:42 AM EDT


You wrote "by the time he has navigated around the screen to dial the number the call has timed out". It sounds like this is a flaw in Cisco IP Communicator. IMO you should report it to accessibility@cisco.com

Do you find this valuable?

Yes

No

Post reply



RE: Large button VOIP phone wanted

Sep 1 2008, 4:05 AM EDT


The people who asked me the question in the place are monitoring this discussion. I'm not sure whether they actually contacted Cisco. Would seem the logical first step. I'm interested to find out if they managed to solve the problem.

Do you find this valuable?

Yes

No

Post reply



RE: Large button VOIP phone wanted

Sep 29 2008, 4:49 AM EDT

Although I have no direct experience of the products themselves I am aware of a couple of third party Cisco compatible softphones which claim to be operable with assistive software and to be designed with accessibility in mind.

The first is the "Audio Assisted Phone for the Visually Impaired" from IP Blue. This claims to be compatible with JAWS and screen magnifiers. Further details can be found at http://www.ipblue.com/products_vlgo_508.asp


The second is "Accessaphone" from Tenacity Corporation. This claims section 508 compliance and full keyboard access. Further details can be found at <http://www.tenacitycorp.com/products.aspx>

Do you find this valuable?

Yes

No

Post reply



RE: Large button VOIP phone wanted

Sep 29 2008, 5:24 AM EDT

That sounds interesting. I'll have a look and pass details onto the original enquirer. Thanks for that.

Do you find this valuable?

Yes

No

Post reply

Fig. 5.8: An AT Wiki forum discussion on complex technology solutions for disabled users

This is especially evident in the forums, where members are able to seek advice from other users and determine the best solutions for both, simple and more complex, technology issues for disabled users.

- **Creating an ‘interactive learning organisation’:** As the Wiki is still in its early stages it is difficult to assess the impact it is having on a wider level, but it is clearly showing signs of moving AbilityNet towards being a more dynamic and collaborative organisation, where established employees and interns alike can share knowledge and opinions:

“The rationale for the wiki comes from problems associated with the fact that the resource base used by AbilityNet – including training courses, information on new products, standards information, disability discrimination act compliance checks – had become static and was not developing as the state of the art evolved.” (Key informant interview)

At present, it is evident that the majority of dialogue and wiki activity is generated by AbilityNet employees. As the membership expands, this existing live debate will encourage other users to participate and contribute.

However, building up a sizeable and sustainable membership is an area where the Wiki is still developing. As one SAQ respondent states:

“It will improve through better promotion and wider awareness, thereby increasing in membership and growing in amount of information shared” (AbilityNet employee, technology provider)

The innovative use of socialisation tools will further help to encourage this, as information becomes more accessible to users and people are made aware of where the information is coming from. Just like established social networking sites such as MySpace and Facebook, users can ‘invite’ others to join and contribute to its development. ‘Feeling part of a widespread community’ (Technology provider) is achievable as the community is visible and users can see it evolve and participate in its evolution.

5.4 Assistive Technology Wiki: Success factors and barriers

5.4.1 What kinds of problems and obstacles have been experienced and how have these been addressed?

The main problems and obstacles experienced and facing the Assistive Technology Wiki can be summarised as follows:

- Membership;
- Active participation of a greater number of members;
- Technical and design issues;
- Balancing the needs of users;
- Funding.

Membership. As AbilityNet is already a successful organisation, membership will steadily grow through promotion and word of mouth, informing people through training pro-

grammes, links with other accessibility consultants and assistive technology vendors. Social networking tools on the wiki itself, which, as mentioned earlier, allow members to invite other users to join. Expanding membership will also increase wiki activity and generate further discussion.

Encouraging **active participation** is also addressed by Wetpaint features. A ‘Wiki Weekly Digest’ is emailed to members informing them of the latest developments and edits, as well as any new members and topics. Users can track threads and topics, send messages and complements to other users, add friends, and are emailed when they receive a message, which means that they are constantly aware of any updates relating to their involvement in the Wiki. The ‘Community Spotlight’, which introduces a member through the ‘Have you met...?’ header section, encourages members to make friends and expand their network.

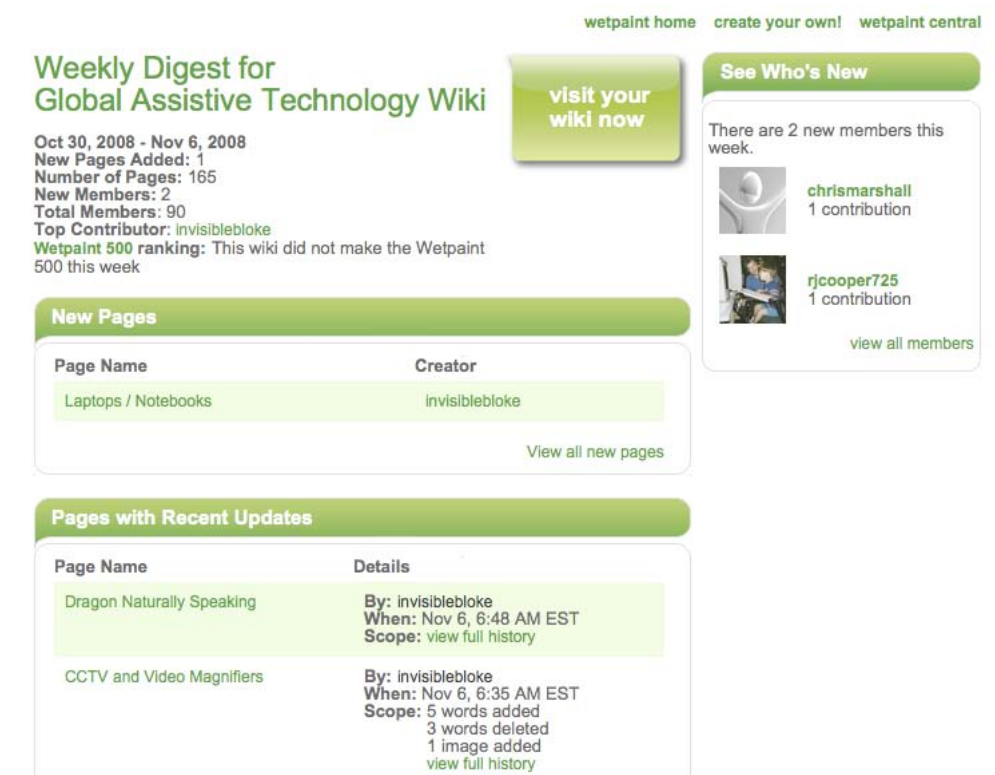


Fig. 5.9: Weekly Digest emailed to members

Members also have active involvement in improving the wiki, through providing feedback and suggestions. In this way **technical and design issues** can be resolved collaboratively.

Some issues mentioned by the SAQ respondents addressed incorporating minor changes to improve usability:

- “Removing wetpaint branding. Better layout, clearer templates...Better navigation, specifically, better navigation box split to just show real content. A little usability study on it and modify layout accordingly? Think the challenge of wikis is making them clear/simple.” (AT Wiki member, technology provider)

- “It’s labelling and association problem” (*Accessibility Consultant*)
- “Logging in using an open id” (*Technology provider*)
- Would like to see “short, entertaining and informative tutorials” included on the Wiki. (*Web accessibility administrator*)

Threads on the welcome page illustrate member opinion helping to change the design and structure of the Wiki:

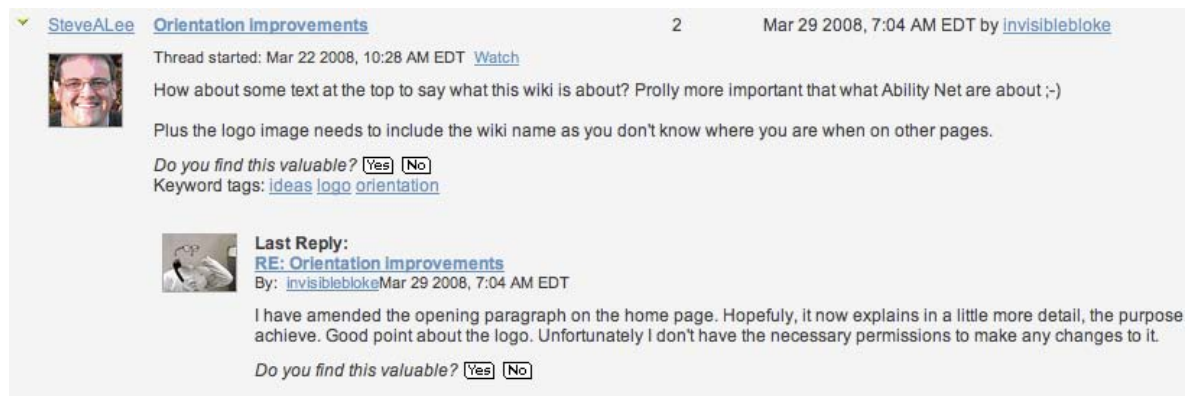


Fig. 5.10: Welcome page thread

5.4.2 Has the initiative created things that were unexpected, or things that have had negative outcomes?

There is no evidence so far.

5.4.3 What factors have contributed to the success of AT Wiki?

The main factors contributing to the successful outcomes of the initiative are as follows:

- The **pedagogic model**, with a ‘routes of desire’ approach, linking members to a value chain of information and services. Users have access to a wide range of Web 2.0 and non Web 2.0 services including traditional training and consultancy, e-Learning, and AbilityNet’s YouTube channel (see fig. 57), Twitterfeed (see fig. 58) and Myspace and Facebook sites.
- Use of **socialisation tools** within a wiki platform to encourage networking between different agencies and develop a more informed resource database on state-of-the-art technologies
- **Accessibility**: AbilityNet’s wiki has been designed with accessibility in mind and complies with WC3 standards. Many Web 2.0 tools can be alienating to disabled users as they are not developed with disabled users in mind. AbilityNet’s Kath Moonan describes some common problems facing Web 2.0 and accessibility.⁴⁹ The AT Wiki addresses these problems and demonstrates that it is possible to make Web 2.0 tools accessible to users with disabilities.

⁴⁹ Moonan, Kath, *Web 2.0 and Accessibility for Disabled Users*, Jan 2007; <http://www.ictknowledgebase.org.uk/web20andaccessibility>.

- The AT Wiki is an innovative use of a Web 2.0 technology which can involve end users directly in the development of Accessibility 2.0, as well as helping other agencies to ensure they do the same.

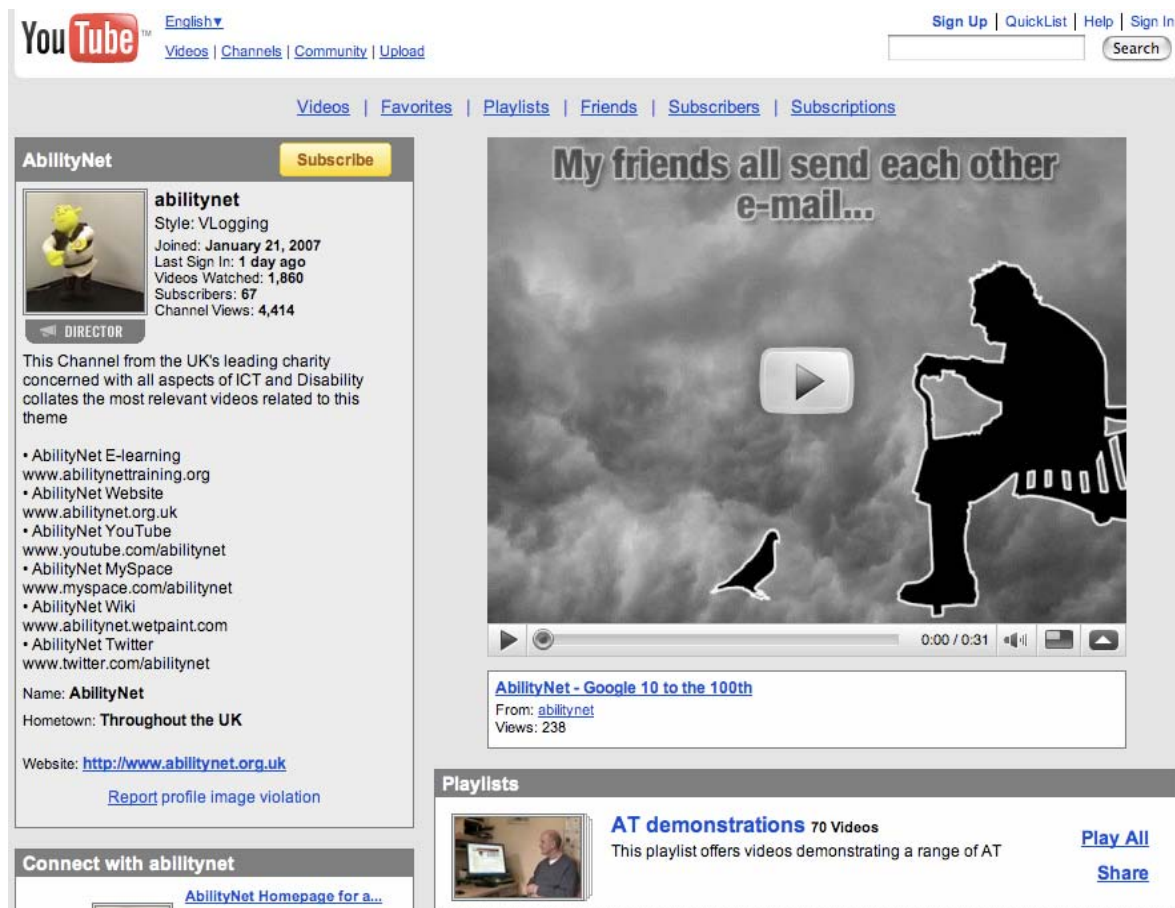


Fig. 5.11: AbilityNet's YouTube channel has 67 subscribers and collates useful videos on AT products, demonstrations and inspiring stories of how AT changes people's lives.

5.4.4 What lessons can be learned?

The main lessons to be learned from the case study are as follows:

- Use of Learning 2.0 technologies can effect organisational change;
- Web 2.0 applications can be easily adjusted to meeting the diverse needs of different users;
- Usability of Web 2.0 applications are compromised to some extent in order to meet accessibility standards;
- Opportunities for cross fertilisation of content and successes can be achieved internationally;⁵⁰

⁵⁰ Banes, David (<http://www.epractice.eu/cases/ATwiki>), last accessed 22nd Oct 2008.

- Web 2.0 applications can be used to reduce the costs and timeframe of putting together expansive, collaborative resources.

Fig. 5.12: AbilityNet's twitter feed keeps followers up to date on the latest AbilityNet progress, involving them in the organisation's development.



twitter

Name or location or [Login](#) / [Join Twitter!](#)

Hey there! AbilityNet is using Twitter.
 Twitter is a free service that lets you keep in touch with people through the exchange of quick, frequent answers to one simple question: What are you doing? **Join today** to start receiving **AbilityNet's** updates.

Join today!
 Already using Twitter from your phone? [Click here.](#)

 **AbilityNet**

Posted quick rant on things to talk about on world usability day at www.abilitynet.org.uk/blog
about 18 hours ago from web

Why is world Usability Day about reducing your carbon footprint ?
 What next usability of healthy school dinners ? *about 18 hours ago from web*

@AccessForAll – Lots of interest in these im glad to say – ideas for V2 much appreciated – all the very best *about 18 hours ago from web in reply to AccessForAll*

Spent day looking at design of learning environments for pupils with complex needs – tomorrow is Surface Day !!! *about 18 hours ago from web*

Name AbilityNet
Location UK
Web <http://www.abilitynet.org.uk>
Bio UK charity dedicated to supporting disabled people in using technology.

66 following | 136 followers | 343 updates

Updates

Favorites

Following

6. Mundo de Estrellas



Fig. 6.1: Mundo GUI.

6.1 Data collection

Data collection activity	Specification (type of data collected; numbers involved)	Profile of respondents/users (age group; gender; learner/inclusion type)
On-line data capture	The MdE portal accessed by patients and other users is not accessible to public.	
Key informant interviews	1	ICT director at Andalucía Department of Health.
Focus Groups	Group interview with technical staff from HP, technology providers for new programme..	ICT director at Andalucía Department of Health. Director of the Information Systems Cabinet, Department of Health, Andalucía. Coordinator of Monitors, MdE Programme, 2000. Account delivery manager, Hewlett Packard for SSPA (Service and Support Professionals Association) Project Manager, Hewlett Packard, MdE Technology Renewal Commercial Director of Health, Hewlett Packard
SAQ	56	Users
Other interviews	12	users, tutors, monitors, coordinators, cancer ward teacher, hospital staff and parent of patient
Observation	Visit to main participating hospital Virgen del Rocío, Seville and to Andalucía Department of Health undertaken. Observation	children's hospital: the school and the oncology ward.

	of use of the MdE portal accessed by patients and other users	
Content analysis	Promotional Material: the web page, brochures, publicity and presentation; technical reports; user survey conducted in 2004 with young users and their families.	

6.2 Case profile

6.2.1 Mundo de Estrellas in a nutshell

The Mundo de Estrellas (MdE) Programme in its original version (which is still in operation in all the participating hospitals) was initiated in 1998 in Hospital Virgen del Rocío in Seville and was rolled out to all 32 public health service hospitals in Andalucía in the year 2000.

The objectives (as stated in project information documentation) was to give all the hospitalised children in SSPA hospitals the opportunity to get to know each other, interact with one another using virtual worlds, voice, images, texts, etc., and develop recreational activities whilst at the same time opening up their experience of intercommunication with any child with an internet connected PC at home or in hospital.

The project also aimed to exchange experiences and didactic content with other systems being developed around the world including Starbright (US), Sterrikind (NL) and Cyberhosto (FR). Counting on institutional solidarity and public/private co-participation, the project delivery focusses on the hospitalised children and those with chronic conditions. The system provides the means to create characters and stories using avatars and virtual worlds, choose spaces to act, promote friendship and company by recreational and educational activities, use new technologies for information and communication, use games in a restricted and limited context, and promote normalisation of illness using classroom and virtual consultations.

The principle technologies used are virtual worlds, 3D images, video conferencing, wireless connection, internet technologies, personalised sounds, multimedia equipment, chat rooms etc. This information (extracted from project documentation) provides an overview of the original system which was technologically advanced for its time. The 3D worlds were created by Electronic Arts using 3D modelling software achieving results not dissimilar to Second Life type environments. The use of virtual consultations and other interactive tools also indicate how advanced it was. The fact that it was rolled out to all 32 SSPA hospitals is significant. In 2004 it was decided that the system needed to be renewed: the infrastructure was becoming outdated with the servers running on old operating systems and the networking needing upgrading. The software used to create the 3D worlds was obsolete so that producing new content of this type was not possible using the same providers and software. Content needed adding to and updating in order to prevent long-term patients becoming bored with existing material.

Hewlett Packard became involved in the design on the new system which would dispense of some of the tools used in the old system such as virtual consultation (which are in use

in other telemedicine projects in the region) and replace them with tools more suited to the end users and their families by providing virtual visiting. The Portal has been redesigned with a clear branding strategy. New areas have been created for user groups such as adolescents. 3D worlds have been substituted with more cost effective flash animations.

The focus of the new MdE is less on providing educational material and more on recreation. The educational content has less dominance but is nevertheless still present. The new system is to make use of the content developed in other SSPA projects and managed by a dedicated system. The new MdE has been in development stages for some time now and is at 55% completion according to coordinators at the Department of Health and HP representatives. Its aim is to continue the philosophy of the old system to use new technologies to get the best level of health education amongst the target population, provide diversion for hospitalised children, and educate patients and others in and outside the health system.

6.2.2 How and why was MdE started?

The original project began in 1998 in pilot phase and was rolled out to the participating hospitals in 2000. The project grew from an idea of an individual, Jose Antonio Cobeña, from the Public Health Service in Andalucía (SSPA), who was convinced that new technologies could have a key role in the development of health provision. The existing (old) system was intended to provide educational support to those patients who would be missing out on school work. It was also designed to provide recreational activities which would help keep spirits up while in hospital and also to provide a means of taking away the fears and doubts of those who were experiencing hospital for the first time and coming to terms with illness requiring hospital treatment. The new system is focussed more on the recreational dimension and the educational material will be delivered in less explicit way. Information for patients and their families and carers will be provided using interactive technologies.

The design for the new system and plans to re-launch MdE began in 2004 and was under way by 2005. It coincided with the developments of digital technologies in the health sector. The speed of development and realisation was influenced by a number of political and institutional factors, as well as the parallel development of other initiatives such as 'Diraya: the digital health history of the citizens' in Andalucía. Other projects run by the Department of Health include Informarse.es salud,⁵¹ Salud Andalucía 24hrs⁵² and Opinarse.es salud.⁵³



Fig. 6.2: Key SSPA initiatives

⁵¹ <http://www.informarseessalud.org/>.

⁵² <http://www.andalucia24horas.com/>.

⁵³ For an overview see: <http://www.juntadeandalucia.es/salud/principal/>.

6.2.3 In what ways has MdE changed?

With regard to the existing system, statistics suggest that usage across the 32 hospitals has remained fairly constant over the last seven years averaging out at 12,657 estimated children using the system per year and a yearly average of 30,554 connections to the virtual worlds being logged. The new system aims to reach a potential target population of more than 1.4m children and teenagers as well as families, carers, professionals, school-children etc. There will be 390 access points throughout the 32 participating hospitals and 292 multimedia terminals.

The technical infrastructure and server software is to be updated to address issues around obsolescence and deal with the projected demand and increased variety of content. Most of the difficulties reported by the users completing the survey related to technical issues:⁵⁴

'The computer is really slow in some games...'

'Sometimes the connection drops and all the games load really slowly.'

'The system hangs a lot.'

'Yes, there are technical problems every day.'

From a user perspective there are many differences between the old and the new system. For example, the new system will not use complicated 3D environments and favours flash-based programmes to create the virtual worlds. The emphasis is now on recreational activity and the learning is delivered in a quietly didactic way once the user is engaged (the old system was more explicit in delivery of educational materials). There will be a virtual visiting area to provide families and carers with more possibilities to engage. Links with schools will be established and there will be a dedicated area for adolescents with content and learning materials aimed at them. Tools such as online consultations will form part of other more specialised initiatives. The programme will seek to make use of content and services provided by other projects such as 'Informarse.es Saludable' and 'Opinarse.es Saludable' amongst others.

6.2.4 How is MdE funded?

The project is funded almost exclusively by the Department of Health in the Community of Andalucía though there was some initial funding provided by EC funds for the original MdE system. MdE has been implemented in 32 hospitals so costs of infrastructure, maintenance and administration are significant. The department of health funds the initiative relying on the considerable financial resources of the Junta de Andalucía.

The new version of MdE is likely to make use of services and content developed in other projects and will use technical support staff at individual participating hospitals to undertake maintenance of the equipment and networking infrastructure. Monitors on call at the participating hospitals are trained and employed by the programme. The central server coordination as well as the software design and development is being undertaken by HP, the technical partner in the project.

⁵⁴ Data from SAQ survey conducted by Arcola Research, 2008.

6.2.5 Who is involved?

The programme is part of a range of health information and technology projects run by the Department of Health in Andalucía, which provide digital and non-digital competences at individual and community level. The original MdE project was piloted in the Virgen del Rocío Hospital in Seville and was rolled out to include all 32 hospitals across Andalucía. The programme has been functioning successfully for some years and there are unlikely to be significant organisational changes associated with the new version. The new system will be implemented in these hospitals.



Fig. 6.3: Children's Wing of Virgen del Rocío Hospital in Seville

The programme provides a set of resources for a large target user group. At present the system is in operation throughout the region and aims to reach a target population of 1.4m children in its new incarnation, as well as a significant number of other users such as parents, families and carers, professional, schoolchildren and the general public.

6.2.6 What Learning 2.0 tools and approaches are used?

The web 2.0 applications in use and to be used are extensive. They are accessible to a large user population and are designed to promote motivation, self confidence, increased

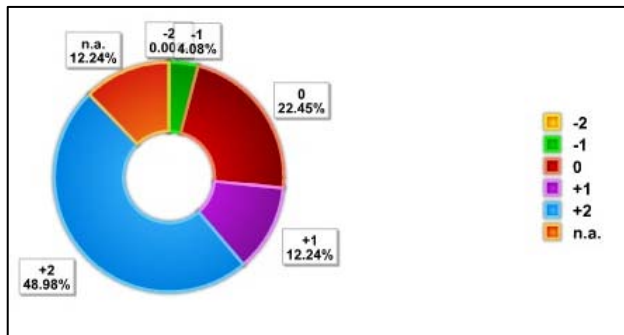


Fig. 6.3: Survey response rating usefulness of video element in user experience

technical skills, and communication with others. The degree of access given to such a high number of users is one innovative aspect of the system in use and the new one being developed. The use of advanced software applications (3D virtual worlds) as part of a dedicated suite of tools and services to a large number of users has supported the process of innovation and integration with other healthcare initiatives in the region.

The tools which have been most accessed by users have included the videoconferencing and chat facilities, very often used in conjunction with visits to the virtual worlds or accessing games involving other players in remote locations.

In an online survey of 56 current users of the MdE system 67% agreed highly that their experience of using the chat facilities was useful and 50% felt the video element was useful. Many of the survey respondents said the best part of the MdE experience for them was chatting to other children, sometimes while accessing the virtual worlds (particularly the virtual discotheque). Whilst a number mentioned the more didactic and informative content, the most popular tools and games were clearly the recreational and interactive ones.

6.2.7 How does MdE promote social inclusion?



Fig.6.4: Classroom facilities using MdE at the Children's Wing of Virgen del Rocío Hospital in Seville

Social inclusion benefits are promoted at individual and community levels. The applications in use in the existing MdE and to be used in the new MdE are aimed at reducing exclusion of hospitalised children and those who are unable to attend school due to illness for, sometimes, extended periods of time.

Exclusion from a formal educational setting due to illness is addressed by the programme by providing educational material, as well as reducing the stigma associated with certain health conditions. In the new version this educational content is delivered in a quieter didactic way than previously where the delivery of this content was more explicit. MdE is also about raising general levels of awareness in the community about illness and those living with long term illness. Normalising the process of being admitted into hospital for treatment is of significant benefit to the target users and their families. Providing the resources to this group while undergoing treatment and the wherewithal to communicate with others in similar circumstances promotes levels of confidence and understanding and reduces anxiety and fear.

Specifically the users and their families benefit in many ways: apart from the educational materials (for example games providing nutritional education and web pages etc.) the pa-

tients have the opportunity to step outside a difficult situation by entering the virtual worlds. This escapism has a positive effect on their well-being and therefore their health and can promote speedier recovery. They can step into other patients' shoes and this 'lifeswapping' activity can lead to a more positive outlook with regard to their own condition/illness. The monitors control the video conferencing to make sure that the likely outcome will for both participants be positive. This promotes a greater level of understanding about illnesses and can help to eliminate myths and misunderstanding about certain illnesses. The new system hopes to be able to expand this dimension by providing links with schools etc. which will lead to greater social cohesion.



Fig. 6.5: User interaction with MdE facilitated by monitor in Oncology Ward of Children's Wing of Virgen del Rocío Hospital in Seville

There can also be indirect outcomes and there have been cases where two children have established relationships and the families have then maintained this long after the children have been discharged from hospital. Other benefits have been observed whereby a user will be given the opportunity to talk confidentially about problems they might be having at home. They have the chance to get things off their chests in a non-threatening, non-judgemental, secure environment. There are both public and private chatrooms meaning the user can have a confidential chat with one person or take part in a discussion involving a number of users. The results of the online survey of 56 current users of the MdE system indicated that using the system had a positive effect⁵⁵:

⁵⁵ Data from SAQ survey conducted by Arcola Research, 2008.

'After using Mundo de Estrellas I felt really good because I forgot about the pain I had and enjoyed myself'

'I was accompanied during my stay in hospital and I laughed a lot with the monitors and friends.'

'After using MdE I felt normal, more entertained...'

6.3 Mundo de Estrellas: outcomes and impacts

6.3.1 What was the extent and pattern of user involvement?

The project involves 32 participating hospitals from the public health service of Andalucía (SSPA), the main one being the Virgen del Rocío Hospital in Seville. The target population for the new Version of MdE is 1,420,000 hospitalised children and adolescents as well as their families and carers and schoolchildren participating in collaborative networking activities with the hospitalised children. The programme provides 390 access points and 292 multimedia PCs.

Utilisation rates from 2001 to 2007 for the present system are as follows:⁵⁶

Year	Connections to Virtual worlds	Estimated number of children
2007	29431	11307
2006	27702	11528
2005	30977	11814
2004	37664	14952
2003	36467	13526
2002	33745	9274
2001	37383	16201

Fig. 6.6: Utilisation rates from 2001 to 2007

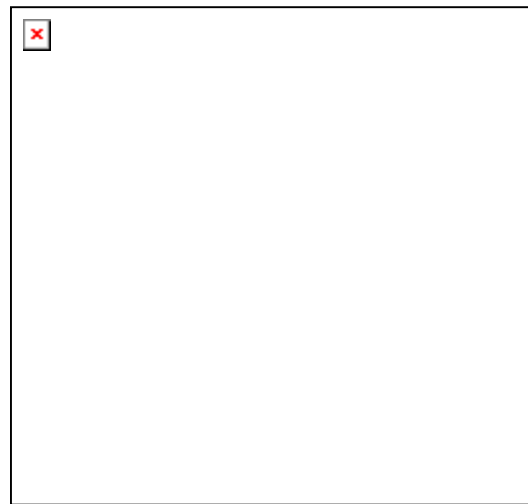


Fig. 6.7: Dedicated facilities (wired or wireless enabled) for young patients on isolation wards

Access points are located either in dedicated schools/classrooms within the children's wing of hospitals such as Virgen del Rocío, or in specific units such as the oncology ward in the same hospital or wireless enabled PCs that can be taken to the wards when the users are unable to use the other facilities.

Monitors employed by the programme are based at each of the participating hospitals and are on hand to supervise and facilitate sessions according to demand. Most access in the classroom areas will take place on a daily basis before and after mealtimes. On wards where treatment might affect access (such as patients with cancer receiving chemother-

⁵⁶ Utilisation data from evaluation report by Department of Health, Andalucía.

apy) sessions take place on demand. Where patients are bed-ridden or being treated in isolation wards the equipment is taken to the bedside or ward.

In the new version of MdE access will be increased to involve additional groups of users such as schoolchildren taking part in awareness and networking activities, there will be improved access for families and friends with internet enabled PCs at home, there will be a dedicated area of the web portal for adolescents, thereby increasing numbers of teenagers using the system, and there will be some facilities for professionals.

6.3.2 In what main ways did participating in the initiative benefit users?

In short, benefits include positive contributions to self-esteem, personal well-being, health, educational, recreational. In the Oncology unit on the children's wing at Virgen del Rocío, one young patient undergoing treatment was participating in one of the virtual worlds (birthday party). His father who attends daily, spoke very positively about the benefits he sees in his son becoming immersed in a world that is different from the harsh reality of his situation.

Other patients spoken to seemed very happy with their participation. They were observed using the system with enthusiasm. The monitors were providing motivation and encouragement where necessary and facilitating in all activities online. In an interview conducted with the teacher in the oncology ward, she describes the most important aspects as those related to animation and motivation. She gives an example of a six-year old whose use of recreational tools has given him energy to deal with his treatment.

There are no courses delivered online but the original system was conceived as a means to provide complementary educational content to children who may not be able to attend school due to illness. The new system will also provide suitable educational material but the focus will be on the recreational and communication possibilities. Awareness raising will also be an aspect of the new system and links between the hospitals and local schools will be created. Health education content will be delivered and tailored to the different user groups such as information about drugs and STDs for teenagers. Practical and general information about the hospital system and layout of particular hospitals will also be provided for those going into hospital for the first time.

In a survey conducted by the project coordinators in 2004, the users and their families assessed the participation in the project in positive terms. These results are supported by the results of the user survey conducted during this case study.

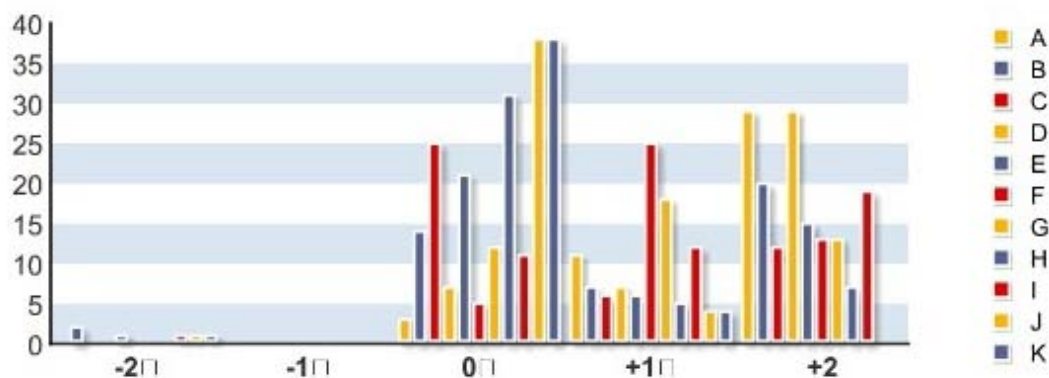


Fig. 6.8: Survey responses indicating ICT skills improvement (self-rated)

When asked about a range of benefits respondents tended to score positively for improvement of ICT skills, using tools for social networking and meeting people online. There were very few negative ratings for any of the potential benefits of participating. (see Fig. 6.8).⁵⁷

6.3.3 What kinds of ICT skills and competences have been supported? Did these include 'higher level' ICT skills?

The initiative supports basic and higher level ICT skills associated with social networking, online gaming and communication. A key area of reported improvement for the main user group (school age children who typically have a relatively good level of basic ICT skills before becoming involved in the initiative) was in higher skills related to using computers for social networking. In an online survey 32% of current users identified this aspect as a key result of participation.⁵⁸

The preferred activities tended to be recreational rather than explicitly educational and participating in 3D virtual world games involving more than one user while simultaneously using chat and videoconferencing facilities were reported to be highly popular.

In the present system provision for adolescents in terms of content, tools and services has not been sufficient at all times to cater for their needs. Most of the activities have been aimed at younger users. This is being addressed in the new MdE system which will have a dedicated part of the portal for this user group.

The new system will also increase access to families, friends and carers and positive outcomes in obtaining ICT skills within these groups can also be expected.

6.3.4 Did MdE help users learn other skills (e.g. 'soft' skills)?

Self-esteem leading to improved personal well-being and enabling the key user groups to deal with their situation could be regarded as one of the most direct benefits in this respect.

Awareness raising will also be an aspect of the new system and links between the hospitals and local schools will be created. This will lead to the development of skills related to tolerance and understanding and communication in general. The initiative could reasonably be regarded as promoting community cohesion and involvement.

Raising general levels of awareness in the community about illness and those living with long term illness is beneficial in promotes self-confidence and understanding while reducing anxiety and fear.

The programme is part of a range of health information and technology projects run by the Department of Health in Andalucía, which provide digital and non-digital competences at individual and community level as well as promoting participation of citizens.

⁵⁷ Data from SAQ survey conducted by Arcola Research, 2008.

⁵⁸ Data from SAQ survey conducted by Arcola Research, 2008.

6.3.5 Did MdE equip users with skills that will increase their labour market opportunities?

MdE is principally aimed at school age children and the focus is more recreational rather than the acquisition of marketable skills. The educational content is nevertheless being delivered in a subtle way. The revised MdE will look at new ways of getting educational material across without sacrificing the recreational dimension. For those children that are excluded from formal education due to illness, the benefits are clear. The programme goes some way to addressing this and will benefit the children when they leave school. Other benefits include those for families, carers, professionals and the wider public and this is expected to increase when the new version is implemented.

6.3.6 What has been the contribution of the initiative to broader social inclusion objectives?

Exclusion from a formal educational setting due to illness is addressed by the programme. Providing educational material to those missing out, as well as reducing the stigma associated with certain health conditions, means the target users are less excluded. Raising general levels of awareness in the community about illness and those living with long term illness is beneficial. Normalising the process of being admitted into hospital for treatment is of significant benefit to the target users and their families. Providing the resources to this group while undergoing treatment and the wherewithal to communicate with others in similar circumstances promotes levels of confidence and understanding and reduces anxiety and fear.

Links between different user groups anticipated in the new MdE will promote understanding, social responsibility and participation in social issues like health and education.

6.3.7 In what ways did the use of Learning 2.0 contribute to institutional and organisational changes?

The implementation of the programme relies heavily on the public institutions involved and the individual hospitals. Organisationally, the operation of the programme is governed by the systems in place in the hospitals. There does not appear to be any difficulty in maintaining present levels of operation which depends on the presence of the monitors to facilitate patients' sessions. The staff appear to be flexible in their approach to running sessions which take place according to need. The level of implementation of the new system and the amount it will be employed depends a lot on the professionals in the individual hospitals and to what degree they decide to engage in promoting the programme as a positive health initiative.

The new system will require a new publicity campaign for the professionals in the hospitals. It needs to be sold on the inside so that all professionals involved buy into it. It must be adapted for individual hospitals so that there is feeling of ownership. There are forums to establish professional requirements with respect to system. Much work still needs to be done for the new system and the new infrastructure will be costly, but there are substantial resources available to the department of health in Andalucía and the new system is likely to rely on volunteer staff to undertake the work done by the monitors and it will leave maintenance up to technical staff at the individual hospitals.

6.3.8 Overall, to what extent were the intended learning and inclusion outputs, outcomes and impacts of the initiative realised?

As far as achieving objectives is concerned, the present system has been in use for a number of years and the users like what it has to offer. Despite competition from other forms of entertainment, patients continue to use MdE encouraged by the monitors. Surveys conducted in 2004 among users and their families indicate positive impact of the initiative in achieving its objectives.⁵⁹ The survey conducted with current users supports these findings.

Results of the survey indicate a high level of satisfaction on the part of users in most areas, particularly using the recreational activities and those tools and services used for communication with other children in similar circumstances such as chat facilities and videoconferencing. There were many positive results reported (other than those related to specific content types) connected to feelings of enjoyment and wellbeing resulting from MdE activities. Professionals engaged in the system supported these results in their comments in interview. Entertainment and recreation were the principal reasons for engagement and benefits from participation in MdE activities and these aspects are to be further developed in the new version.

The main problems identified with the present system relate to technical issues and, to a lesser extent, variety of content. Many users were frustrated by the slowness of loading games and applications, the connections being dropped, computers locking up and other problems related with the age of the system. Most users were able to identify the nature of the problem and cause of dissatisfaction. These issues are being addressed by the technical providers of the new system, Hewlett Packard. The original system is now old, the games engine used to build the 3D environments is obsolete and no longer in use, so they cannot be added to, the infrastructure is out of date and the content is limited for some user groups like adolescents. The new system anticipates an overhaul of the technical infrastructure, new programmes, applications and software tools, improved content and more choice, particularly for certain user groups. In general there will be a greater variety of content for an increased number and range of users.

The reach of the project, level of accessibility and the flexible and efficient nature of this access as well the degree of integration with other healthcare initiatives is clear. The challenge will be to optimise use of the new system among the target group and to extend the reach of the project to other users. Much will depend on the professionals within the institutions buying into the idea and recognising the positive impact of this system to the health and wellbeing of the target audience and also on the continued dedication of those already working on the project who have made it the huge success is currently is.

6.4 Mundo de Estrellas : success factors and barriers

6.4.1 What kinds of problems and obstacles have been experienced and how have these been addressed?

The problems experienced by all groups of users, particularly the target group of hospitalised school-age children, almost exclusively relate to technical issues. The system has

⁵⁹ Data from evaluation carried out by Department of Health, Andalucia.

been in operation across a number of participating hospitals throughout the region of Andalusia in Spain for a number of years. The technical infrastructure is in need of renovation and the new system will be redesigned to support the new applications, wider range of content, services and tools.

The present system is slow and outdated leading to technical difficulties for the users particularly because many of the software applications require relatively modern equipment to run them. Expectations of users have increased and people are less willing to wait extended lengths of time for programmes to load, and are frustrated when software applications lock up due to technical hitches. Results of the survey conducted by this case study of 64 current users reflected this dissatisfaction and indicated that these were the key problems experienced.

Since there are other forms of entertainment available which may be preferred if unsatisfactory user experience occurs a lot, (such as DVD players, games consoles, TVs etc) it is incumbent upon the project to address these technical difficulties with the appropriate solutions. The technical specifications for the new version of MdE are set out in the project documentation and cover all aspects of the infrastructure, making particular mention of key components such as the virtual worlds, the videoconferencing facilities and the present ISDN communication infrastructure.

Changes will also be made at many levels and the technical support covers functional, technical and economic aspects giving examples of those areas where changes are required.

Other than technical issues, very few problems have been reported or observed by this case study: there appear to be no financial obstacles as the resources available to the SSPA are significant and this project is one of a number of technology and health initiatives running in Andalusia.

Political will and the organisational and institutional response to the development and implementation of the new system is likely to positively affect the way in which the new version is adopted. The new system is dynamic and connected in a way the old system was not. It reflects the current technological climate and will use a multichannel delivery method in line with other projects in operation in Andalusia and described above.

6.4.2 Has MdE created things that were unexpected, or things that have had negative outcomes?

Few of the unexpected aspects reported or observed have been negative or had negative consequences. In general participation in the project has been a positive experience, both from the user point of view and the staff and professionals engaged in organisation, delivery and facilitation or activities. Whilst there are aspects that can and will be improved in the new version, the classic system has been a huge success for the many users accessing it over the last eight years.

The project has achieved in general what it set out to do though it appears to have been used most in the originating hospital and the other main hospital in Seville, suggesting that its usage in outlying areas could be improved.

6.4.3 What factors have contributed to the success of this initiative and what lessons can be learned?

The main factors contributing to the successful outcomes of the initiative are as follows:

- **Successful implementation** of a technologically advanced suite of tools, services and content types to a high number of end users in a large number of public hospitals over a wide geographic area. Due in large part to substantial public funding.
- **Dedicated staff** of monitors and coordinators responsible for facilitating and encouraging the engagement in project activities by patients on a regular basis, sometimes in situations where motivation can be difficult. Also the recognition of benefits by other health professionals not directly involved in MdE activities.
- **Integration** of the project in a wider programme of initiatives where cross-fertilisation and technology transfer can take place. Shared content and administration and management of content will be exploited more fully in the new version.
- The firmly held **belief** that innovative technology can have a huge impact in health initiatives and particularly on the lives and well-being of young people in hospital.

The reach of the project and the ambitions of the new version to target 1.4 million users are a result of the considerable resources of the Andalusia Health Service (SSPA) and the political will required to roll out such a scheme throughout the region. While it is clear that some hospitals have participated to a greater extent, it is important to engage a large number of institutions to make the system worth implementing and running.

The coordinators and monitors involved in day to day activities of the project are based in the hospitals and are key to the success of the initiative in each of the public hospitals involved. Their work is highly praised and the amount of access and quality of access is dependent on their continuing presence.

Continued success of the project and particularly the launch of the new version is dependent on other professionals recognising the health benefits of participating in the activities, enabling patients to deal with their hospitalisation better, respond to treatment quicker and be discharged earlier. The new system will make use of content developed for other public health programmes and will make full use of content management strategies, methodologies and teams engaged in work on related initiatives. Some of these programmes are listed above.

The use of ICT, and particularly, entertainment and recreational activities to relieve boredom, provide amusement and increase levels of well-being in young patients has been shown in this project. The 3D virtual worlds and the communication tools have been highly popular and beneficial for patients, their families and professionals. Educational content has also been delivered and will be updated and expanded in new version.

The main lessons to be learned from the case study are:

- **Institutional buy-in** is necessary to success of the project;
- Adequate **funding** will ensure that project objectives can be met;
- **Integration within hospital culture** supports success;
- **Integration with related projects** can favour TT and knowledge exchange;
- **Dedication of key staff** is crucial to how activities are approached and received.

7. ALPEUNED



Fig. 7.1: The UNED platform

7.1 Data collected

Data collection activity	Specification (type of data collected; numbers involved)	Profile of respondents
On-line data capture	Online community not alive since in between two academic years (start: end October).	Material on website use assessed at: http://adenu.ia.uned.es/alpe/ http://ec.europa.eu/information_society/activities/eten/cf/opdb/cf/project/index.cfm?mode=desc&project_ref=ETEN-029328 http://www.uned.es/webuned/areasgen/info/english10.htm http://tecnologiasaccesibles.com/en/alpe.htm
Key informant interviews	Telephone & skype interviews Email exchanges	Coordinator
Focus Groups	None	
SAQ	SAQ had to be adapted to comply to WAI WCAG 1.0 but wasn't uploaded in Community	
Other interviews	N/A	
Observation	None	
Content analysis	No classic learning content, learning is informal induced by peer learning . Article on ALPEUNED	
Other		

The ALPEUNED case study encountered a number of data collection problems. The major problem was that, at the time the study was being implemented, the ALPEUNED community was suspended for four months. This was aimed at reviewing and improving the platform and infrastructure and was timed to co-incide with the academic year. A re-launch of the service was then planned for the end of the year 2008. As a result, it was not possible to access users, and in particular to deliver the on-line Self Administered Questionnaire to students (the end-users). The main data sources on which the case study results were based were therefore quite restricted, and consisted of:

- Interview with the website manager and administrator;
- Content analysis of the platform⁶⁰ including ALPE brochure;
- Content analysis of user postings on the website (361 postings);
- Content analysis of reports on site usage, and related ALPEUNED initiatives (EU4ALL and ALPE); project reports and evaluations;⁶¹
- Analysis of utilisation data automatically generated by the website (482 users, 4 administrators).

7.2 Case profile

7.2.1 ALPEUNED in a nutshell

The Disability Office of the Spanish National University for Distance Learning (UNED) manages an online community for students with disabilities. The purpose is to offer an interactive student community where information on projects, approaches, methods, accomplishments, and proposals can be exchanged. This includes encouraging students to interact through a virtual forum, collaborating with research projects, and increasing awareness of the range of resources available to support disabled university students.

This community runs on dotLRN open source platform for which the aDeNu research group at UNED is providing technical support, including quality control of the user experience. The communication between the user and the collaborative platform has a direct influence on the user experience with the online community. Interfaces and interaction procedures should be designed with the needs of all end users in mind, requiring high degrees of flexibility and a sound knowledge of the end users abilities and preferences. Usability and accessibility are addressed, as real accessibility demands appropriate levels of efficiency and satisfaction in user-system communication.

7.2.2 How and why was ALPEUNED started?

The Community for Attention to Disability was set up to take account of the requirements of students with disability at UNED. UNIDIS (the disability office) wanted to build this online community and its related services to students with disabilities to provide peer support and shared problem solving, to provide news services, coordinate the involve-

⁶⁰ <http://adenu.ia.uned.es/alpe/>),

⁶¹ http://ec.europa.eu/information_society/activities/eten/cf/opdb/cf/project/index.cfm?mode=desc&project_ref=ETEN-029328; <http://tecnologiasaccesibles.com/en/alpe.htm>.

ment of users and their feedback, to make learning accessible, improve academic performance and avoid drop outs. Disabled students should be enabled to share their experiences and make their views heard, to help understand the perception and needs of students with disability, as well as to support the involvement of end users in research projects.

All students with disability at UNED are registered at the disability office. The Deputy Vice-Chancellor for Student Affairs, who is responsible for the disability office, addressed a letter to each of the 4026 students with disability asking them if they would like to join the Community and take part in aDeNu's projects. They were given the choice to reply either by post or by sending an email to the Community administrator.

Two research projects about accessible, technology mediated learning: EU4ALL (IST-2006-034778) and ALPE (eTen-2005-029328) have been supporting the development of the online community.

7.2.3 In what ways has ALPEUNED changed?

The community was not active during the 2008 summer holidays but will resume soon since the academic year just started when conducting this research (in Spain, academic year starts end mid October). The community is planning during this new academic year additional services such as career guidance and IT training.

7.2.4 How is ALPEUNED funded?

No specific funding was needed to set up the online community. This is an internal initiative of UNED technically supported by the research team of UNED, aDeNu (<http://adenu.ia.uned.es>). aDeNu is currently involved in two research projects about accessible, technology mediated learning: EU4ALL (IST-2006-034778) and ALPE (eTen-2005-029328).

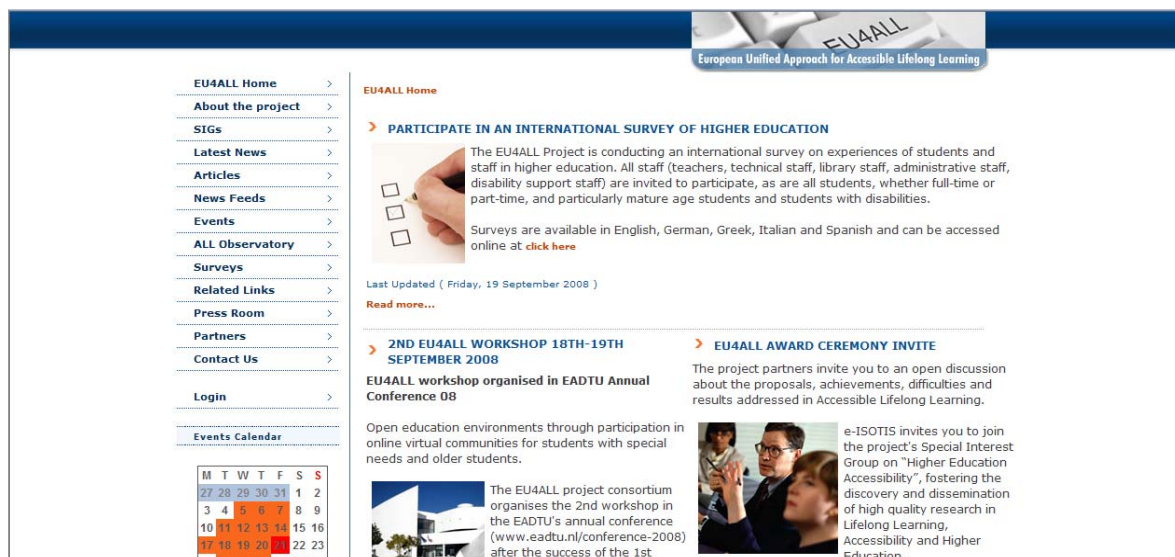


Fig 7.2: EU4ALL website (<http://www.eu4all-project.eu/>)

7.2.5 Who is involved?

The UNED team consisted of 4 administrators from the UNED Disability Unit who coordinated the initiative and the aDeNu team providing the technical support. 482 students with disabilities were active online this year. Lecturers and teachers were also involved.

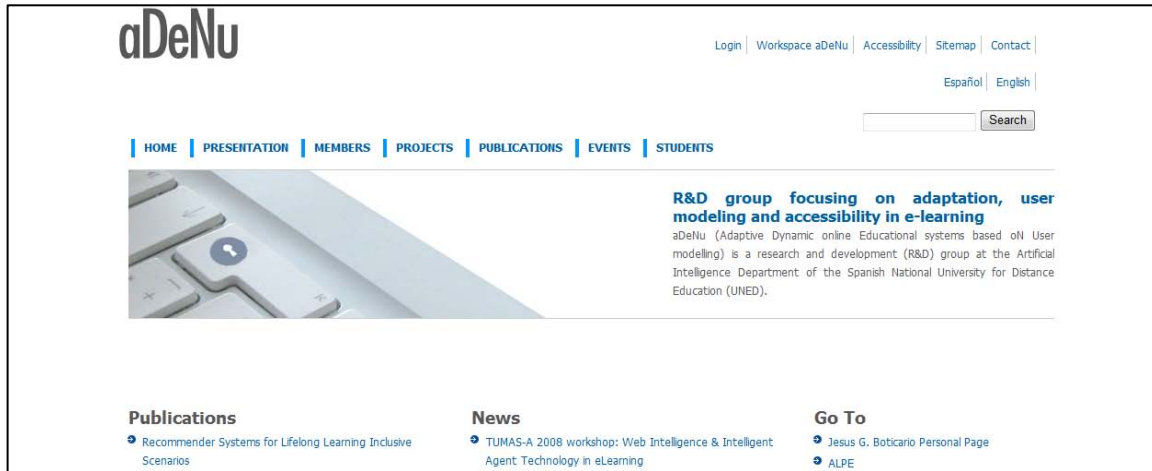


Fig. 7.3 The aDeNu website (<https://adenu.ia.uned.es/web/>)

7.2.6 What Learning 2.0 tools and approaches are used?

After verification, the web 2.0 tools used for this initiative from the wide range of web 2.0 tools available could be perceived as very low. The main tool is the online community and its learning platform (AA compliance with WAI WCAG 1.0). Several technologies are nevertheless available (SCORM, IMS-QTI,IMS-LD). The community is using the latest dotLRN version. So predominantly, ALPEUNED uses social networking and online fora for peer counseling purposes.

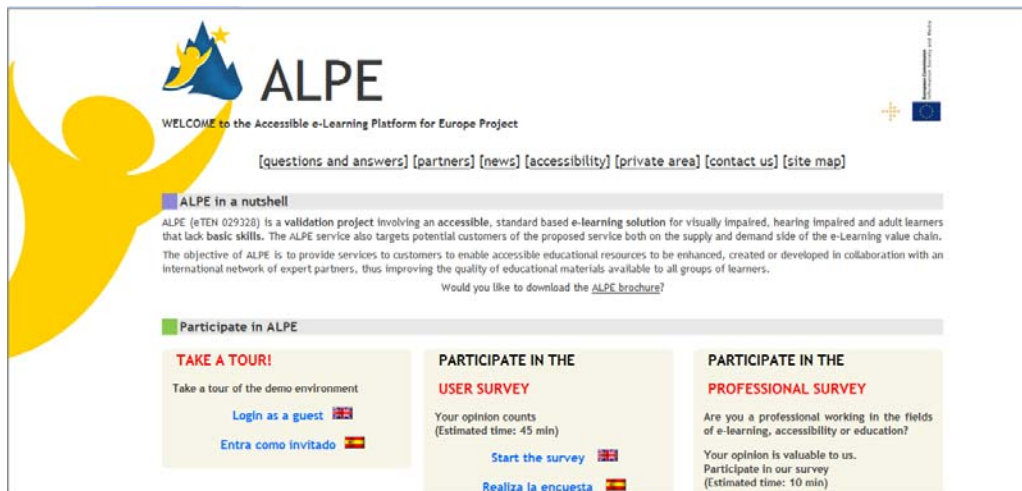


Fig. 7.3: ALPE (<http://adenu.ia.uned.es/alpe/>)

7.2.7 How does ALPEUNED promote social inclusion?

More than 4000 people with disability are enrolled and study at UNED. They represent almost half of the students with disability enrolled in Spanish universities. The commu-

nity was created so that disabled students could share their experiences and make their views heard. Disabled people face all kind of barriers which in the case of ALPEUNED were drastically reduced allowing to access peer counselling, learning materials and learning itself. The fact that the platform is open to the UNED community enhanced the feeling of being part of a wider community.

Disabled students participating in the community feel part of the broader UNED Community. The sense of community and shared problem solving has made them cooperate and exchange advice on using the platform. Assigning functions and allowing self-selection has proved an effective way of inducing students to participate. The students have been prone to offer suggestions and guidance to other fellow students registered who had any problems accessing the platform. The community is open to a wider community of all those at UNED who are motivated to work on the subject of accessibility mainly from a personal (students) or professional point of view (teachers, researchers etc.) and managed to include severe disabled people (equal or greater than 33%).

The community also was part of a European collaboration project, making students feel part of an even wider community, the European one dealing with e-accessibility.

7.3 ALPEUNED: Outcomes and impacts

7.3.1 What was the extent and pattern of user involvement in ALPEUNED?

The online community created a personal learning environment for the 482 disabled students (out of 4026 in total enrolled at UNED) fed by the peer counselling, debates in forums and participation in research projects on accessibility. This informal learning did not happen through specific learning activities. The peer counselling was the basic core service of the platform empowering the students to learn independently. The assumption behind this is that disabled persons can better support other disabled students, because of the first person knowledge of the obstacles encountered by disabled students in studying at a distance university.

The students learned about available support services at the University and also that they can be supported by their peers or support the others in return to solve a different problem. ICT based support services offered them advice on Assistive Technologies and gave them a voice that was heard at the University. The service making use of an accessible platform (AA compliance with WAI WCAG 1.0) was not previously provided by UNED or any other Spanish University.

Although no specific learning activities have been carried out so far, students created their informal personal learning environment. Additionally, due to the participation in the European research projects, EU4ALL and ALPE, students had access to relevant documents via the file management area of the platform, which increased awareness on the projects' activities among the community members.

The main asset of the community proved to be **peer support**: Students tended to search for other members studying the same courses, make new connections, share materials, and update information concerning events, funding opportunities etc. The Community provided a source of practical support at short notice, and as needed. This is particularly beneficial for those students who experience feelings of isolation because of their disabili-

ity. The online Community provides them with a flexible way to benefit from peer counselling. This support has helped students at different moments since the Community was started. Up to now the most relevant areas of interest include:

- **Administration:** A third of the communication - 33.3% - within the Community deal with issues concerning the university administration. For instance, there have been many protests concerning a new regulation that will be applied to 2nd session registrations fees (as these will stop being free for students with disability in 2008). This activism is an example of the influence the Community might have as a lobby representing the interests of students with disability.
- **Accessibility and usability:** About 10% of the messages are concerned with these issues. Users report having had accessibility problems or difficulties in using the platform. For example, some found problems when they needed to use a technical aid such as JAWS, or some inquired about using different platform functions. It is other Community members who reply to their queries providing advice. These reports are useful so that the community of UNED and dotLRN developers can solve the problems that arise.
- **Academic and library:** 3.7% of the users' postings asked for course notes, inquired about dealing with subjects, accessible materials (books, notes) available and library loan procedures. Questions concerned deadlines and being able to send someone else to the library in order to collect the books.
- **Assessments:** 3.6% of the messages deal with special exam adaptations for students with disability such as different formats, extra time etc.
- **Employment:** Another 3.3% of the reports deal with employment opportunities for people with disability. They observe the difficulties they can find when trying to get a job and criticise the current situation of the labour market.
- **Physical Access:** 2% of the mails posted denounce the lack of accessibility to certain university premises.
- **Communication:** There is a 0.8% of the messages that report having had communication problems with staff working at UNED or with other students (deaf students who are used to lip reading)
- **Miscellaneous:** 43.3% of the Community communication would be included here. Messages sharing and discussing more personal matters such as new member introductions, describing their disabilities and the problems these entail, poetry exchange etc. Also announcements concerning car tax reductions for people with disability, or problems when using the university web site appear here.

7.3.2 In what main ways did participating in ALPEUNED benefit users?

The community enabled UNED students with disabilities to:

- Have at their disposal a peer counselling service about learning and assessment strategies, assistive technologies, accessible learning materials;

- Be able to report accessibility problems at the university and in the elearning platform;
- Access a news service;
- Support the management of research projects related with e-Inclusion as end users;
- Share their experiences and make their views heard, to help understand the perception and needs of students with disability,
- Support the involvement of end users in research projects;
- Organise themselves to lobby against university rules directly affecting them.

Apart from feeling part of the UNED community and even a Europe wide community, disabled students were given the opportunity to access learning by peer counselling and shared problem solving, but more importantly the platform gave them the perfect opportunity to engage themselves in the role of guidance and advising as any citizen engaged in a learning community.

7.3.3 What kinds of ICT skills and competences have been supported by ALPEUNED? Did these include 'higher level' ICT skills?

As mentioned before, ALPEUNED was a project where only low level/conventional ICT skills were required since the accent was put on accessibility first. In the next months, UNED is planning to use the platform for training purposes, among others the subject "ICT skills" will be offered.

7.3.4 Did ALPEUNED help users learn other skills (e.g. 'soft' skills)?

Citizenship is a soft skill induced by the online community. The peer counselling and shared solving problem method where the disabled student were receiving information but also engaging in guiding the other students boosted self-esteem and responsible and active engagement in the learning society.

The creation of their personal informal learning environment and access to learning undoubtedly enhances their self-management capacity. Personal soft skills such as being responsible, possessing sociability, integrity and honesty, interpersonal communication and active listening skills were developed. Interpersonal soft skills such as participate as a member of the Team, teaching others, work with cultural diversity, motivates others are inherent to peer counselling.

7.3.5 Did ALPEUNED equip users with skills that will increase their labour market opportunities?

No evidence so far can be shown.

7.3.6 What has been the contribution of ALPEUNED to broader social inclusion objectives?

No real evidence of impacts on inclusion at the broader level. The contribution of platform to labour market mobility for disabled is not established, and there is limited evidence on whether and in what ways the online community is contributing to developing social capital.

7.3.7 In what ways did the use of Learning 2.0 contribute to institutional and organisational changes?

This project hardly used Learning 2.0 as said before and identified limited effects of on institutional change in UNED – but it the platform and services developed by ALPE are nevertheless helping UNED on a daily basis to improve its services to its students. The end user's have a virtual space to discuss the problems and potential improvements to support students with disabilities and the technical research team and Management Board receives direct feedback from the “customers” to improve e-accessibility and physical accessibility of the UNED premises.

7.3.8 Overall, to what extent were the intended learning and inclusion outputs, outcomes and impacts of the initiative realised?

No evaluation has been finalised so far to be in the position the answer the question. The only indicator appearing to be useful so far is that 482 disabled students out of 4026 in total enrolled at UNED joined the community. The second indicator is the user tracking system put in place between June and December 2007 that shows evidence of higher need of the platform and its services during and before exam periods.

Nevertheless, UNED is convinced of the real impact of the online community for providing easier access to UNED courses for disabled persons and therefore decided to permanently sustain the service. The two research projects are completed since a couple of month.

7.4 ALPEUNED: success factors and barriers

7.4.1 What kinds of problems and obstacles have been experienced and how have these been addressed?

The main problems and obstacles experienced in ALPE can be summarised as follows:

- **Motivational and user engagement problems:** As pointed out only 482 disabled students out of 4026 in total enrolled at UNED joined the online community.

In the field of support to students with disabilities, there are many things to improve at UNED, as in most of the Spanish Universities (White Book on Spanish University and Accessibility, 2007). This may cause negative attitudes in students who are not willing to collaborate through the community.

The issue has, of course, been addressed and the Managing Board is awaiting for the results of the evaluation of the two research projects and the results of the evaluation of the online community to draw conclusions, map problems and plan how to overcome them. The decision to add more services such as career guidance or training through instructional design has already been taken, broadening the scope and services of such a platform can only attract more people to join especially if training programmes are added to it.

- The **main interaction flow** – 43.3% of all communications – covered personal matters, and not issues directly linked to accessibility. When it comes to analyse the content, it reveals an interesting fact, that only a bit more than 25% of the communication are related to course content itself. In detail the usage pattern is as follows: University

Administration: 33.3%; Accessibility and usability: 10%; Academic and library: 3.7%; Assessments: 3.6%; Employment: 3.3%; Communication problems with UNED staff or students: 0.8%; Physical Access to premises: 2%; Miscellaneous: 43.3%. The new envisaged services intend to reduce the personal and “chat”-like communications.

7.4.2 Has ALPEUNED created things that were unexpected, or things that have had negative outcomes?

Firstly, this initiative has allowed UNED to participate in two European research projects getting the participation and feedback of the end users themselves, i.e. UNED disabled students, and enhancing their feeling to belong to not only the wider UNED community, but also European community.

As an interesting second side effect, the online community started to intensively discuss issues concerning the university administration (33.3% of communication flow) and especially the new regulation that was to be applied to second session registration fees for disabled students. Before, disabled students had been exempted from paying this fee. This activism is an example of the influence the Community might have as a lobby representing the interests of students with disability.

7.4.3 What factors have contributed to the success of ALPEUNED and what lessons can be learned?

The main factor of success of this initiative was of course the technical accessibility of the platform (AA compliance with WAI WCAG 1.0. Thanks to the user’s feedback, the platform was constantly updated and e-accessibility was a big effort maintained by the Technical Team throughout the project.

The real success factor has been the decision about the pedagogical model to follow: Online community supporting peer counselling and shared problem solving which empowered the disabled students and enhanced their feeling to being part of a wider community.

The involvement in European Research projects does not have to be neglected giving students and UNED staff access to existing literature about e-accessibility.

8. Conecta Joven

conectajoven Fundación Esplai

Intranet | Plataforma e-learning y foro | Red Conecta | e-pandora | Despertar inquietudes en l@s adolescentes

Presentación | Convocatoria | Testimonios | Participantes | Galerías de fotos | Enlaces | Contacto

¿Qué es?

conectajoven
es un proyecto de aprendizaje y servicio que impulsa la participación de los jóvenes a su comunidad mediante acciones formativas orientadas a la alfabetización digital. Para más información pinchar [aquí](#)

Colaboran:

Microsoft

Wrigley

Reportaje:
Experiencia conecta Joven Junio 2006
[Calidad media - Descargar - 4,82 MB](#)
[Calidad alta - Descargar - 14,7 MB](#)
[Subtitulado Inglés - calidad media - 11,1 MB](#)
[Subtitulado Inglés - calidad alta - 24,7 MB](#)

3er encuentro Conecta Joven

V Encuentro de e-inclusión

El V Encuentro de e-inclusión tendrá lugar durante los días **5, 6 y 7 de Noviembre** en Centre Esplai, El Prat de

Fig. 8.1: Conecta Joven web portal (<http://www.conectajoven.org/index.htm>)

8.1 Data collection

Data collection activity	Specification (type of data collected; numbers involved)	Profile of respondents/users (age group; gender; learner type; inclusion type)
On-line data capture	Websites of Conecta Joven, Conecta Red and coordinating body, Fundación Esplai, examined. Provides utilisation data	project description documents , news reports and slideshow presentation material. video clips. Evaluation report conducted by CREA at University of Barcelona and commissioned by main funding partners Microsoft Corp.
Key informant interviews	2	Director of Regional Coordinators) and Catalina Parpal (Education Coordinator)
Focus Groups	0	None undertaken
SAQ	0	
Other interviews	0	
Observation	No observation was possible	None undertaken
Content analysis	Project description documents, news reports and slideshow presentation material, video clips giving user perspectives; evaluation report conducted by CREA at University of Barcelona	

The main problem with data collection in this case was lack of co-operation from key project stakeholders. The user SAQ was translated from English to Spanish and placed online via a link with the project website. However, the project co-ordinators failed to support the data collection effort. The data sources used for the case study included the following:

- 2 key informant interviews with coordinators from the Esplai Foundation;
- Content analysis of Websites of Conecta Joven, Conecta Red and coordinating body, Fundación Esplai;
- Content analysis of project description documents (which included utilisation data and details of participating organisations), news reports and slideshow presentation material, video clips giving user perspectives and overall idea of how the project works.

Furthermore, the evaluation report conducted by CREA at University of Barcelona and commissioned by main funding partners Microsoft Corp (CREA, 2007), the project profile on the ePractice portal⁶² and further review reports (Peña-López, 2007; del Aguila Obra et al., 2002) were consulted.

8.2 Case profile

8.2.1 Conecta Joven in a nutshell

Conecta Joven is a project based in Catalonia, Spain and involving 23 centres throughout the country, which provides basic ICT skills to key target groups, including women over 45, older people and immigrant populations. The classes are run by young people who have been recruited and trained by project motivators who in turn are trained by the project's coordinating staff. The project, together with *Conecta e-inclusion*, is part of the *Conecta Now* initiative.

Conecta joven is run by Esplai Foundation and the key financial stakeholder is Microsoft Corporation (under the 'unlimited potential programme'). Wrigley (the chewing gum manufacturer) is also involved. Government institutions (the Ministry of Work and Social Affairs, the Ministry of Education and Science and Injuve - Institute of Youth) and NGOs are involved in running the project. Learning content is developed by the coordinating bodies and working groups and this process is facilitated by web 2.0 tools and services in particular social networking using the networking tool 'ning'.

Conecta Joven places emphasis on education for the citizen, intergenerational relationships, narrowing the digital divide and community creation using new technologies and synergies created in the environment where it operates.

The project is based on the following principles:

- Acquisition of competences and knowledge which benefits young people and society;
- Intergenerational collaboration promoting citizenship among young people and older members of the community;

⁶² <http://www.epractice.eu/cases/conectanow>.

- Educational methodology of service learning, which develops capacity in the relationship between content, knowledge and social involvement for the young people;
- Optimisation of public spaces for training of basic ICT skills;
- Networking, involving social initiatives as key elements of the social fabric of citizens together with educational institutions and public administrations.

Esplai trains motivators in groups of 8-16 over 7 sessions from Tuesday to Friday. They also receive 20 hours online training. Standards and training modules are produced by Esplai. New content for courses to be imparted by young people are developed during the process of training, as well as advice from real experience with classes. Development sessions take place with motivators and young people and content is developed on topics such as 'surfing the Internet'.

Young people are then recruited by the motivators and trained the young people in groups of 16-30 over 20 hours. This is organised according to requirements of participating organisations. The young people then teach groups of 6-8 adult learners. There are normally 2 young people for each group of 6-8. This is because most centres have an average of 8 computers. The young people acting as facilitators are involved on a voluntary level.

8.2.2 How and why was Conecta Joven started?

This project developed from an existing project *Red conecta* and started in January 2006. The main aim is to facilitate access to ICT to as many people as possible using young people as tutors. The Esplai Foundation had experience of working with new technologies in projects with young people and computers. It has been involved in Lifelong learning initiatives and e-learning.

The present project grew out of the previous project Red conecta which aimed at reducing the digital divide using public and private internet/computer centres in towns. The project coordinators from the Esplai Foundation discovered that there were many computer classrooms that were not being used fully because there were no individuals to direct activities. Esplai-run centres, on the other hand, were full. The organisers realised that if they trained young, digitally literate people to teach basic ICT skills to target users, then the existing centres would be used more and new centres would spring up. Esplai foundation works in a network with other organisations. Microsoft became involved as key funding organisation; the Ministry of Education and Science became involved as well as other public bodies; other commercial partners include Wrigleys. The other main group of partners were social bodies (now amounting to 23 throughout the country).

8.2.3 In what ways has Conecta Joven changed?

The project has not been running for a long time and so the aims of the project and the target user groups have not changed since the outset. The organisational structure and processes have not been altered. The project still addresses the same social problems (namely tackling problems arising from the digital divide) in the same way, using the same training methods and groups of coordinators, motivators and young trainers to de-

liver the basic ICT skills courses. Some new materials are being developed as the project progresses. The different phases of the training process can be described as follows:

The project phases follow the academic year and this has remained unchanged. The project is now in its third year and development has been constant. Good bases have been established and are being built on. The groups of young people are being consolidated. Many of the previous groups of young trainers want to be involved in current projects as well, which is a measure of success and also presents a challenge to the project, as to how to accommodate this demand.

8.2.4 How is Conecta Joven funded?

Microsoft (through the unlimited potential programme) was and still is the main financing body involved. The Esplai Foundation provides some funding for the project (it is unclear how much) as well as coordinating it.

The project has never received any EC funding. The Ministry of Work and Social Affairs and the Ministry of Education and Science are involved and provide some support but this is not always financial.

Injuve, the Institute of Youth run by the Ministry of Equality, is involved as well. The International Job Foundation is involved and brought the chewing gum manufacturing company, Wrigley, in as funding body. There are sufficient financial resources for the project to continue operating at present capacity and the project is able to survive, though the ambition is to increase capacity.

It is hoped that a commercial organisation can be encouraged to come up with a practical and realisable strategy for scaling the service provision up. Costs for each person involved in service provision will therefore become progressively lower. The problem is that, because of the profile of the target groups, it is not easy to see a commercial benefit.

8.2.5 Who is involved?

In addition to the funding organisations and stakeholders mentioned above the main groups involved at the delivery of courses other than the coordinators, motivators and young trainers are the participating regional bodies. The groups targeted by the project include primarily adults, older people, women (without professional careers and mostly over the age of 45) and immigrant populations. These groups typically have little financial resources. Each motivator has his own methodologies to be applied in particular context with particular user profiles. Language is not necessarily the main issue of concern. The Latin American immigrant population represents an important subsection of users, as does Moroccan and Subsaharan African populations. The level of Spanish in these groups is good in general so lack of language skills does not represent a serious obstacle to delivering the basic ICT skills courses.

8.2.6 What Learning 2.0 tools and approaches are used?

Conecta Joven is directly aimed at supporting lifelong learning and social inclusion. Web 2.0 tools and services are used principally by the methodology working group to develop new course content and support their activities and by the motivators to share knowledge and good practice with regard to the recruitment and training of young people to deliver the course to the target groups. There are some indications that the virtual platform could

be more fully exploited particularly by involving other users more, namely the adult learners being equipped with basic ICT skills.

With the young people, blogs are used (conectajoven/blogspot). Motivators use platforms with discussion fora, they create work groups, chat and email and use social networking site 'Ning' where debates take place and content is elaborated. Apart from the training platform used, the project uses an e-learning platform and mobile platform. These are used by motivators for trials, debates, collaboration etc.

The effect of the use of these tools has been positive.

“It has changed the way we work. Now there are resources. People can make use of other peoples content and experience. They can express their doubts and access advice. In many ways it has helped.”

One respondent (and key coordinator of the project activities) emphasised the importance of the social network that has been set up using 'Ning'.

“It is vital for the interaction of the working groups, where knowledge can be shared.”

He regards it as “intelligent networking” and says: *“it is not being used just for the sake of it. It is really practical”*.

Resources can be shared and content can be created. The methodological group uses these tools as well as the motivators. It is constantly moving forward and Ning has provided the project with an effective knowledge sharing network.



Fig.8.2: Ning website search results indicating presence of conectajoven online net-working group

8.2.7 How does Conecta Joven promote social inclusion?

Conecta Joven is directly aimed at supporting lifelong learning and social inclusion. Involving young people with good ICT skills to provide training for adults and immigrant populations promotes community cohesion, multiculturalism and intergenerational learning as well as narrowing the digital divide. The virtual platform supports the process at higher levels but does not involve the end users. Courses are delivered but no evaluations are conducted by the regional centres.

There are strong indications that the project is achieving its objectives and the results available suggest that a significant number of the end user group (4,601 in academic year 2007-2008) are using the skills provided by the training courses in their daily lives.

In an external evaluation on the Conecta Now programme (which includes both Conecta Joven and Conecta e-inclusion projects) commissioned by Microsoft and conducted by the Centre of Research and Practices that Overcome Inequalities (CREA) at Barcelona University, it was found that 100% of Conecta Now users incorporated their acquired knowledge into their daily life. 64% use it to communicate through email, 69% use it to generate documents, 49% to communicate using instant messaging and 44% use it to look for a job.

The main objectives of tackling social exclusion with the use of web 2.0 tools and services are being achieved in a broad sense but those responsible for running the project refer to areas where the project has succeeded and areas where things could be improved:

“Our goal is to create a viable network for adults which will work as effectively as those for young people and which they can access for collaborative learning.”

In remarking on the achievements of the project another respondent explains that *“the objective is not numerical. It is to promote intergenerational learning. There is no direct way to measure this.”*

8.3 Conecta Joven: Outcomes and impacts

8.3.1 What was the extent and pattern of user involvement in Conecta Joven?

In 2007, the project involved the following groups: ⁶³

- 814 young trainers
- 4601 adult learners
- 525 young people and motivators in the events
- 62 participants in direct training
- 70 places in online training
- 124 institutes and state schools
- 48 other bodies and institutions
- 34 Local regions

Full details of how these different groups and bodies fit into the training activities of the project are given above. The phases of the project are based around the academic year and follow a cyclical pattern with the training of the motivators coinciding with the beginning of the school year and the final activities in July consisting of tutorials, sessions with the young trainers, tutorials and evaluations.

The Esplai Foundation coordinates the project and bodies from the social, leisure, voluntary and education sectors develop its activities. The regional NGOs involved in the project provide their experience in crucial areas of the project: community work, education of young people, collaborative work with educational centres and with public administrations

⁶³ Data derived from evaluation report conducted by CREA at University of Barcelona.

The institutes and educational centres disseminate information about the project amongst young people and their families as well as allowing the project to make use of their computer suites and classrooms. Other administrative bodies, neighborhood associations, day centres and other local centres are also involved.

There are participating organisations throughout Spain in the regions of Andalucia, Asturias, Castilla la Mancha, Castilla Leon, Cataluna, Extremadura, Galicia, La Rioja and Madrid.

The main users benefiting from the initiative consist of groups with little or no basic ICT skills including: adults, women with no career (typically aged 45 and above), older people and immigrant populations.

The young trainers benefit from participation in the project in many ways: teaching experience, reinforcing and gaining higher ICT skills, developing skills around patience, commitment, solidarity and so on.

In a video clip sequence on the website one motivator describes the young people's involvement in the following way:

“Young people already have extensive technical knowledge. In fact, technical content is just an excuse; working on attitudes and social skills accounts for 85% of the time.”



Fig. 8.3: Website videoclip posterframe referring to training of young people

Another describes the training of the young people in these terms:

“We have trained them to understand the digital divide, the psychology of adults and how to work with them, communication and how to address them, social skills etc.”

8.3.2 In what main ways did participating in Conecta Joven benefit users?

The main benefit to the end users is the acquisition of basic digital skills and associated benefits. As well as teaching basic functions and file management, the courses typically teach the adult learners how to undertake basic word processing tasks using programmes such as microsoft word, also working with spreadsheets (excel); as well as browsing the internet and using email programmes.⁶⁴

⁶⁴ Data derived from content analysis of material provided by Esplai (co-ordinators of Conecta).

In addition to these benefits it is clear than many of those involved in receiving training experience a number of other benefits related to soft skills and social interaction with others receiving training and the young people providing the training.

It is clear from the video clip sequence (which features two of the adult learners) that the benefits have been considerable both as far as picking up skills is concerned and interaction with the dedicated young people giving the training.

The young people acting as trainers benefit by participating in a number of ways and, in many cases, are keen to continue being involved year on year. Apart from the valuable teaching experience this work provides (adding to CV and employability), there are numerous benefits in terms of soft skills and social skills such as commitment, responsibility and solidarity. Additional ICT skills are described in following section.

A teacher involved in the scheme says:

“I believe that these young people are learning things that will help them to be better people in the long run.”



Fig. 8.4: Website videoclip posterframe referring to benefits for young people

The motivators have a crucial role in the process as described elsewhere and this group benefits in many ways including their own professional development and in many other aspects. Coordinators similarly carry a significant responsibility in ensuring that the project objectives are achieved and the sources available to this case study suggest that their contribution is highly effective.

The organisations involved benefit (according to project documentation and video clips involving members of local schools, citizenship bodies etc in participating regions) in a number of ways including better working relationships and networking with other bodies, schools, institutes, access to young people, collaborative learning with other organisations in the region, more recognition on the part of the public administrations, experience in application of new Service Learning Methodology, more publicity, and so on.

8.3.3 What kinds of ICT skills and competences have been supported by Conecta Joven? Did these include 'higher level' ICT skills?

The initiative supports basic and higher level ICT skills for different groups: The adults learners receive basic ICT training as described above (word, excel, internet browsing, emailing and messaging etc.); higher level skills associated with use of web 2.0 tools (social networking, blogs, discussion groups, collaborative learning environments etc) are likely to be developed and reinforced among the young trainers, motivators and coordinators.

It has not been possible to ascertain for certain or explore in depth as this case study was not given access to any of the user groups or even those responsible for day-to-day work involving web 2.0 tools.

It has only been possible to draw conclusions from the secondary data in conjunction with the two interviews conducted with key informants. The video clip sequence available on the website suggests that the acquisition of ICT skills is just a small part of the overall benefit to users; one adult learner commenting so favourably on the learning experience and the patience, preparedness of the tutors that she would happily go back to school. However, the acquisition of skills and receiving recognition in the form of a certificate awarded in a public ceremony is regarded a real achievement for the participants.

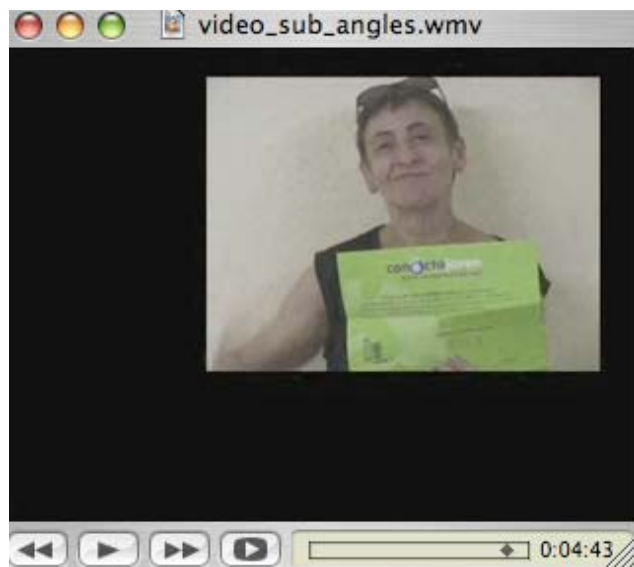


Fig. 8.5: Website videoclip posterframe showing benefits for adult learners

8.3.4 Did the initiative help users learn other skills (e.g. 'soft' skills)?

From the information available on the project website and from reported benefits, it is clear that all groups involved have benefited considerably, none more so than the end users: the adult users receiving the training. Video clips on the site show how important the experience has been for some adults, apart from the acquisition of digital skills. Participating in the classes and obtaining skills is a huge boost to the self-esteem of many adults who may never have had the opportunity to learn in this way. Both key informants remarked on the importance of the public award ceremonies held at the end of the courses and gave examples of adults who have felt an enormous sense of achievement in having attended the courses.

The fact that the trainers are young members of the community means that the initiative has clearly supported promotion of citizenship among participants and strengthened community cohesion. Tolerance among different social groups and towards young and old alike is also likely to be promoted by this sort of activity.

The young trainers gain valuable experience and develop competences related to participation, solidarity, patience, group work, commitment etc. Their sense of social responsibility and cooperation is strengthened and leadership skills improved.

They are put in the shoes of their teachers and this 'lifeswapping' experience is likely to have positive outcomes.

One young trainer says:

“I have learned to be patient, to explain myself better, to have more confidence in myself.”

Another young trainer describes the experience in this way:

“You see others doing something to learn and then you think that they are giving you the opportunity to learn. This helps me better use the opportunity I have to learn what they teach me so I can later teach others.”

The motivators and project coordinators are likely to benefit from continued involvement in the project and engagement in collaborative working and knowledge sharing. Good organisational and working practices are likely to be reinforced and shared amongst those involved.

8.3.5 Did the initiative equip users with skills that will increase their labour market opportunities?

The main objective of the initiative is to tackle the digital divide by equipping adults with ICT skills which will improve their employability, as well as providing other benefits associated with the acquisition of ICT skills. It goes without saying that obtaining skills in these areas will increase labour market opportunities, even in labour markets where use of computers is limited such as the agricultural sector. Access to different jobs depends more and more on the ability to conduct online searches of job markets and enter details relating to one's suitability for certain types of work.

The young people conducting the training clearly improve their chances of finding the employment they want by participating in such a project. Not only do they improve their own ICT skills, they also develop communication and teaching skills and the other soft skills referred to above.

The CREA report gives details of the degree to which the users in Conecta Now projects incorporate their newly acquired skills into their daily life. All of the users include the use of ICT in daily life.

8.3.6 What has been the contribution of the initiative to broader social inclusion objectives?

It is clear that initiatives of this type will contribute to social capital, community cohesion, lifelong learning, intergenerational learning etc.

Promoting cooperation amongst local organisations and diverse members of the community will undoubtedly have positive benefits for the individuals and the community.

An adult learner describes the way the initiative helps to modify the way young people are often regarded:

*“In many cases I believe people are mistaken because they think that young people can't contribute anything. On the contrary I believe they may even be able to contribute more.”*⁶⁵

8.3.7 In what ways did the use of Learning 2.0 contribute to institutional and organisational changes?

The impact the project has had on institutional and organisational change in a wider sense has not been explored in depth by this case study. In the absence of additional information with regard to this aspect (and from participating government departments, NGOs. etc) it has not been possible to be more specific. The video clip and website material (involving different representatives members of some participating regional bodies) suggests the contribution has been positive. Other indications also suggest this is the case.

In terms of the project itself and the Conecta Now initiatives some observations can be made:

- The different phases of the project follow a clearly defined cycle which is described in more detail in 8.2.1. The organisation of the different groups involved in the delivery of the courses to the adult learners needs to be carefully coordinated in order to effectively deliver the course materials to the end users;
- Use of web 2.0 tools and services (including social networking, online discussion groups and blogging facilities) has facilitated dialogue and aided the collaborative process required to produce new course content and train the motivators and the young trainers in turn;
- The impact of the relatively recent engagement in social networking is regarded as positive;
- The evaluation (of the Conecta Now projects) conducted by CREA at Barcelona University at the behest of the main funding partners Microsoft makes particular mention of the organisational model developed by the project. This is regarded as a main contributor to the success of the project together with the finance model.

8.3.8 Overall, to what extent were the intended learning and inclusion outputs, outcomes and impacts of the initiative realised?

- Both key respondents and main project coordinators are satisfied that the project has achieved what it set out to do in broad terms. There are areas where improvements in use of web 2.0 tools across a wider range of users would be beneficial. There is also a need for increased funding in order to continue to develop and scale up the activities.
- The report of the evaluation by CREA on the Conecta Now projects indicates that in many areas the project has been successful in realising the intended learning and inclusion outputs, outcomes and impacts. Figures relating to the increased use of newly acquired skills are convincing.
- Evidence on the web site (video clips etc) suggests that at a personal level a number of adult learners are satisfied with the training they have received and the way in

⁶⁵ Data derived from content analysis of material provided by Esplai (co-ordinators of Conecta).

which the project has delivered the courses. This is supported by the testimonies of all stakeholders interviewed for the video sequence on the website.

- It is also clear that the events organised by the project are well-attended and attract participation of a large range of stakeholders and interested parties.
- The less positive aspects reported included the fact that the web 2.0 tools and services were only used by certain groups (motivators, young trainers etc) and it was hoped that in the future a web platform could be developed for use by the adult learners. This is anticipated for the next phase of development of the project.
- Development of a collaborative learning culture among motivators and coordinators has been realised to some extent and is said to be functional and practical in improving work practices.

Clearer indications might have been provided by some utilisation data from the project website. In addition the user self-administered questionnaire adapted, translated and put online specifically for this case study was not completed by any users despite the repeated requests to project coordinators of those undertaking this case study. This, together with user interviews (also requested), would have provided valuable data as to outputs, outcomes and impacts mentioned above.

8.4 Conecta Joven: success factors and barriers

8.4.1 What kinds of problems and obstacles have been experienced and how have these been addressed?

It should be noted that data collected on problems and issues has been limited and largely reflects the 'official' view of the initiative. Due to the success and popularity of the project from the young trainers point of view, many of those involved have been keen to continue working with the project and providing continuity of these individuals has presented a challenge to the project. Because the project is relatively new this is not a problem that has been repeated year in year out, but nevertheless would benefit from being addressed at the earliest opportunity in order to maintain the level of involvement and given the initiative a degree of sustainability at a local level.

Another obstacle that has been reported is the difficulty of attracting funding in order to extend the reach of the project and its activities to other localities and regions.

The project is able to continue functioning at present levels as it makes use of existing classroom facilities in the 23 participating regions and relies on the voluntary involvement of the young trainers and motivators. All stakeholder and user groups will benefit from increased capacity and provision.

8.4.2 Has the initiative created things that were unexpected, or things that have had negative outcomes?

None reported other than the realisation that the number of people who are not digitally literate extends to many different sectors and can sometimes include people who would have been expected to have some basic ICT skills at least such as businessmen and women in their 40s (for example) who somehow have missed out the digital revolution but are more and more required to use these technologies. In some cases these individuals

have to overcome personal and cultural obstacles to engage in the process and attend courses such as those held by the project.

The use of the web 2.0 tools by motivators to facilitate communication, knowledge sharing and course content creation is mentioned in positive terms. Lack of a functional web platform in which the newly trained end users can engage is regarded as a negative aspect and one that will be addressed by the project.

8.4.3 What factors have contributed to the success of Conecta Joven?

The main factors contributing to the successful outcomes of the initiative are as follows:

- The adaptability of the young people which has helped to improve intergenerational contact and strengthened community cohesion.
- The CREA report praises the project for its 'model of finance and management'.
- The use of the social networking site, Ning, has been influential in creating 'a truly practical collaborative working environment' for the motivators and the young trainers. Use of other web 2.0 tools such as blogs and discussion forums has also had a positive impact.
- Undoubtedly there are many examples of good practice and success factors which cannot, unfortunately, be identified or explored due to lack of access given to this case study.
- Many of the most positive aspects of the project are reflected in the personal testimonies of the people interviewed for the video material from the web site. There is no easily accessible information with regard to shortcomings or less effective aspects.

The project is able to continue functioning at present levels with existing funding but the aim is to scale up the operation to include a greater number of participating bodies. This may be achieved if additional funding can be secured from the commercial sector. The difficulty with this is in attracting business to invest in groups which have very little.

5. Strong and weak points

The evaluation results indicate that CONECTA NOW project has reached its objectives. The investigation team has detected the following strong and weak points in order to help the continuous reflection on the evolution of CONECTA NOW.

CONECTA NOW Strong points
CONSOLIDATION As a project that contributes to the overcoming of the digital divide and answers the actual necessities of the users.
UTILITY Utility of the acquired knowledge. 100% of the users use ICT in their daily lives.
METHODOLOGY Based in the proximity, confidence and learning of the users, their possibilities and the use of dialogue.
INTERGENERATIONALITY The idea of the intergenerational interaction of <i>Conecta Youth</i> is a success in the instrumental dimension as well as in the dimension of values. Young people and adults increase their level of motivation and learning.
MULTICULTURALISM Meeting point of people from different cultures. It promotes the overcoming of prejudice and a better interaction among the different cultures of the community.
FREE SERVICE Model of finance and management. It assures universal access by its free service.
VOLUNTEERING Acknowledgement of the role of volunteers. Incorporation of volunteers in the project.
IMPACT IN THE COMMUNITY Users and entities of the surroundings make the dissemination of the project as a referent in ICT training and as place of good coexistence.

CONECTA NOW Weak points
14 % of the centres don't realise evaluations of any kind.
Absence of the users in the virtual platform.
Absence of exchange among users of Conecta Now.
Minimal use of Conecta resources by neighbourhood entities. At the moment the low percentage is of 29%.
Minimal offer of week-end activities and services (14% of the centres open on Saturday and 5% on Sunday).

9

CREA: Scientific Park of Barcelona University. Florensa Building. Adolfo Florensa street, 8, office 12-13. 08028 Barcelona. Phone: 93 403 50 99

Fig.8.6: Table extracted from CREA report on Conecta Now projects

8.4.4 What lessons can be learned?

The main lessons to be learned from the case study are:

- Importance of ‘motivators’ in e-skills development.
- Partnerships with business, local councils and third sector crucial for sustainability.
- Volunteers pivotal to success
- Adequate funding difficult to obtain when main beneficiaries are less well-off members of society.
- Other than by reference to limited interview material and secondary data such as the CREA report and website content, it has not been possible to identify and explore the key areas of success and failure of the initiative from the user groups point of view. Nor has it been possible to identify good practice in order that it may be shared among other projects working to narrow the digital divide and promote intergenerational and lifelong learning.

9. MOSEP



Fig. 9.1: MOSEP promotional flyer

9.1 Data collection

Data collection activity	Specification (type of data collected; numbers involved)	Profile of respondents/users (age group; gender; learner type; inclusion type)
On-line data capture	MOSEP Wiki Educator (Over 500 edits, accessed over 41,600 times) Blogs: 5 Blogs (447 entries between September 2006 – October 2008) and 4 blogs from project partners (over 20 entries between 2006 – October 2008)	www.wikieducator.org/MOSEP http://wiki.mosep.org/Mosep/ Many project partners discussed MOSEP in their personal blogs or set up Wordpress or Eduspace blogs because of their involvement in the project. There was also a MOSEP blog at MOSEP partner website (http://www.pontydysgu.org/)
Key informant interviews	1	Project co-ordinator.
Focus Groups	/	The project is finished and a focus group could not be organised.
SAQ	10 SAQ responses	The respondents were teachers and trainee teachers from the partner testing sites. Profiles: Age range 45-60: 2 male and 3 females graduates/postgrads in full-time work. Age range 31-45: 1 male postgraduate in full/part-time education Age range 21-30: 1 male graduate in full-time

		work, 1 female graduate in full-time education Age range 17-20: 1 female graduate in full-time work
Other interviews	1 interview	Anonymous – testing partner for Evaluation phase of the project.
Observation	/	The project is finished and an observation could not be organised.
Content analysis	8 reports; 1 DVD; 4 video presentations	

9.2 Case profile

9.2.1 MOSEP in a nutshell

MOSEP, *more self-esteem with my e-portfolio*, is a training course for teachers, educational counsellors and vocational trainers to enable them to deliver the e-portfolio method to their learners. Through addressing the needs of the teachers and trainers, MOSEP recognises that it is not simply the Learning 2.0 technology itself that is the innovation for education, but how it is used to support learning.

Whilst the e-portfolio method has been a learning ‘buzz word’ for a long time, MOSEP wanted to look at the e-portfolio process from the perspective of didactical strategies to support learning, rather than the technology behind it. The actual software is not a key factor, it is the learning strategies employed and the knowledge and skills of the teacher or vocational trainer in knowing how to support a learner with their e-portfolio that is the key to its success.

Using a learner-centred approach, MOSEP’s e-portfolio focuses on identifying all aspects of the e-portfolio process, from looking into the need for e-portfolios and what they should include, to the importance of reflecting on peer assessment. It is vital that teachers/trainers go through the e-portfolio themselves in order to fully understand the process and be able to support their learners.

The tutorials employ a variety of methods including internet-based activities, presentations and video podcasts, group work, discussions and peer review for face-to-face delivery, and online collaboration and networking for individual study

9.2.2 How and why was MOSEP started?

The project started in 2006 with the aim of addressing the needs of young people in the transitional phase of their education (age 14-16) who are faced with important decisions about their future. MOSEP looks at combating the problem of early school leavers and unqualified or unemployed young people in light of the EU target of lowering the average rate of early school leavers to no more than 10% (age 18-24) by 2010. The main impetus is described in the study:

“Throughout Europe there are ominous signs that a class is emerging of poorly educated young people with disrupted learning biographies and little chance of finding jobs...MOSEP addresses the problem of early school leavers at the stage in which

young learners are in danger of dropping out of the formal education system, in adolescence.”⁶⁶

Through inspiring self-esteem and self-direction in these learners and enabling them to take responsibility for their own learning through the e-portfolio process, it is hoped that they will become “*self-confident and competent 21st century citizens*”.

One of the innovative things about the MOSEP project is that it recognises that whilst the e-portfolio process has enormous potential for young learners, it is a useless tool without the guidance and knowledge of skilled teachers and trainers who are able to establish a successful program.

In 2005, the project was proposed by Salzburg Research in Austria, who wanted to examine ways of helping teachers to implement such a program, as well as the best means of guiding and supporting learners. They worked with 9 other partners from 7 different EU countries in order to develop a program that was adaptable to suit different organisations across the EU with different needs and educational cultures.

The different phases of the project can be described as follows:

- Phase 1: Primary research phase into the learning requirements of the targets groups and institutions, the idea of an e-portfolio from a didactical point of view and the necessary skills for teaching and learning. Output: MOSEP Study.
- Phase 2: Development phase in which the partners worked collaboratively to develop the MOSEP course modules and content, as well as its delivery method. Output: MOSEP training course.
- Phase 3: Evaluation phase in which the course and materials were tested and evaluated.

9.2.3 In what ways has MOSEP changed?

Despite the difficulties in coordinating so many partner organisations to develop one coherent study and course, MOSEP has not changed dramatically since it began. The delivery method of the course was decided during the process of the project:

“Changes were minor and I’m really happy about that. The one thing that changed was that we didn’t really decide in the proposal stage in what way we wanted to deliver the course. So we left it up to the consortium and we agreed in the first year that we were going to follow the structure in the open wiki format.” (Wolf Hilzensauer, project coordinator, Salzburg Research)

Similarly the use of e-portfolio software changed as the project progressed due to developments in the open source sector, as the original aim of creating their own generic e-portfolio software shifted towards using an existing format and adapting it for MOSEP’s needs:

“We changed this during the whole project because we realised during the first proposal phase that lots of development was being made on the open source sector and

⁶⁶ The MOSEP study, p.6 (October 2007).

we changed things in terms of using an existing open source tool and translated it into five different languages.” (W. Hilzensauer)

One of the major changes, however, was the focus of the project’s target group. Initially, MOSEP was devised with lowering EU ‘drop-out’ rates as a long-term goal. However, as the project developed the spotlight shifted entirely to the people involved in educating young people. Whilst the needs of 14-16 years olds were still an important aspect, they were addressed indirectly by ensuring that teachers, trainers and vocational counsellors were aware of how to successfully deliver an e-portfolio programme to their students.

9.2.4 Who is involved?

Throughout the research, development and evaluation stages, the MOSEP project involved 10 European partners from Austria, Bulgaria, France, Germany, Poland, Lithuania and the UK.

Fig. 9.2: The MOSEP course modules on Wiki Educator

Partner site	Nature of institution
Salzburg Research, Austria	Project coordinators. Not-profit research organisation that carries out applied research into creating and managing digital content for the private and public sectors. www.salzburgresearch.at
Pedagogical Institute of Lower Austria	Offers advanced teacher training, as well as courses and seminars. www.pinoe-hl.ac.at/
Teacher Training Institute Salzburg, Austria	Teacher training college and research into educational/vocational/social fields, focusing on ‘soft’ skills as well as technical skills. http://www.phsalzburg.at/
Student Computer Art Society, Bulgaria	A non-profit, non-governmental organisation which holds seminars, courses and conferences and focuses on vocational training and career development, as well as e-learning, processing and delivering information to young people and ICT and modern media training. http://www.scas.acad.bg/nov/V6.HTML
National Academy for Advanced Training Germany	Teacher training college, which provides training for teachers and educational personnel. Educational management, development and consultation, educational psychology. http://lehrerfortbildung-bw.de/lak/
European Institute for eLearning, France	Non-profit European professional association which supports organisations, communities and individuals in building a knowledge economy and learning society. www.eife-l.org
Kaunas University of Technology, Lithuania	University specialising in technology and social and physical sciences. www.ktu.lt
University of Science and Technology, Poland	Technical university in Krakow. www.agh.edu.pl
Pontydysgu, Bridge to Learning, Wales, UK	Welsh educational research institute focusing on advanced learning technologies. www.pontydysgu.org
Wolsingham School and Community College, England, UK	School, Sixth Form and community college in County Durham, an isolated rural community. www.wolsinghamcollege.durham.sch.uk

9.2.5 How is MOSEP funded?

MOSEP was funded by the Leonardo da Vinci programme with an overall budget of €480,000 for 2 years and 10 partners.

Since the end of the research phase and the development of the MOSEP materials, the project is self-sustaining, having produced a free training course in five languages. No specialist MOSEP trainer is required to help implement the project in other institutions. The open-source Wiki will enable future participants to continue contributing and expanding the project. The flexibility of the program means organisations and individual teachers/vocational counsellors can pick and choose the necessary information and adapt it to their own classroom.

9.2.6 What Learning 2.0 tools and approaches are used?

The MOSEP project used and will use Learning 2.0 tools and blended learning approaches at all levels of its development, dissemination, instigation and evaluation. From researching the study, developing materials, delivering course modules, reflecting and evaluating project experience to the actual creation of students electronic portfolios all aspects of the project incorporate some form of Learning 2.0 technologies.

MOSEP uses an open-source wiki platform to deliver its course materials, which will enable teachers and trainers to modify the content as they learn from their experiences of using the method and receive feedback from their learners. The project uses a blended learner-centred approach. Through the collaborative development of a flexible course format which has been designed using a semantic wiki in five languages and can be adapted to different target groups in different organisations, the project addresses the needs of many institutions internationally for an effective e-portfolio solution. The MOSEP pilot project used the Mahara e-portfolio software for creating e-portfolios but the idea of the project is flexibility, and organisations should chose the most suitable software for themselves.

In devising and developing the content, the partner sites used a range of Web 2.0 technologies for “*communicating, for shared access, for providing information*”⁶⁷, including FlashMeeting, bookmarking and tagging, SlideShare, Flickr, RSS feeds and blogs.

The use of blogs by partners on Eduspaces, Elgg and Wordpress platforms show the tool as a valuable means of reflection on the MOSEP project, as well as on the ideas surrounding e-portfolios themselves. Engaging in discussion on forums or writing blogs enabled partners to share experiences on implementing an e-portfolio process in their schools and training institutions, as well as reflect on ideas expressed by other MOSEP partners or stakeholders in education across the worldwide web.

For example, from the perspective of the University of Science and Technology in Krakow, Agnieszka Chrzyszcz’s blog explores the background to e-portfolios in Poland, helping other partners to understand the needs and requirements of students and teachers there:

⁶⁷ MOSEP project partner, SAQ response.

“What do Polish teachers understand by portfolio? It is a collection of artefacts in a paper-folder focusing on a particular subject, it supplements the lessons as a form of notebook. In each case portfolio was an individual attempt to make the lesson more attractive. It wasn't a part of any strategy, either national or local. Portfolio was a complementary tool rather than an approach to everyday teaching practice and its aim was to support the project's method...Teachers were not supported by any strategy, training programme or an advisor. Usually other teachers were not willing to cooperate with them (additional workload).”⁶⁸

Graham Atwell's blog, reporting from the perspective of the project partner from Pontydygu – Bridge to Learning, reveals a very different picture of the attitude to electronic portfolios in Wales, where they are already a much-discussed topic and the needs and requirements are more advanced:

“I know for many of the people who read Wales Wide Web introducing e-Portfolios and developing learning materials on a wiki will be nothing new. But for me this project is particularly satisfying - we are moving the use of Web 2 tools for learning outside the Edubloggers circle and into the mainstream of education and training and that can only be for the good.”⁶⁹

Throughout the project, partners had to consider these diverse needs and backgrounds, finding an equilibrium between the more basic, functional aspects and the more advanced aspects of e-portfolio development, which can facilitate the learning process. In the 2007 study, MOSEP discovered that the use of Web 2.0 technologies for learning could elevate the status of electronic portfolios. The study refers to Lee Raine (BBC, 2005) in highlighting the importance of technology in young people's lives and its potential for archiving and reflecting on informal learning:

“These teens were born into a digital world where they expect to be able to create, consume, remix and share material with each other and lots of strangers.”

Web 2.0 technologies are also highly important for both delivering course content, and for students in creating and updating the electronic portfolios themselves. When looking at the use of e-portfolio software, the MOSEP study refers to George Siemens' 5-level model about the needs of different users when adopting e-portfolio approaches, all of which include Web 2.0 tools and technologies⁷⁰. These 5 levels recognise the different requirements of the individual vs. the institution.

For Siemens, Level 1 and 2, which include least advanced Web 2.0 technologies, are considered to be the most effective methods of engaging learners and provide the greatest value. Level 1 is defined by MOSEP as **Static web pages** or 'e-portfolio systems without database-driven interactivity', although wikis and blogs are considered part of this system. Level 2 is considered to be **Dynamic, database-supported document management systems** which additionally offer technical support for students.

⁶⁸ Chrzaszcz, Agnieszka (17 October 2006), Case studies in PL, <http://eduspaces.net/agnieszka/weblog/>, last accessed 12 October 2008.

⁶⁹ Atwell, Graham (12 January 2008) Learning about e-portfolios, <http://www.pontydygu.org/2008/01/learning-about-e-portfolios/>, last accessed 12 October 2008.

⁷⁰ Cf. <http://www.elearnspace.org/Articles/eportfolios.htm>.



Fig.9.3: MOSEP's classification of e-portfolio products according to George Siemens (Salzburg Research 2007)⁷¹

Levels 3, **Institutional systems**, and 4, **Integrated portfolio systems**, are considered to be most beneficial to institutions or faculties, whilst Level 5 recognises e-portfolio solutions designed for the needs of industry and standards.

Future development of e-portfolio systems will perhaps involve the use of mash-up applications, as suggested by Helen Barrett in her blog, *E-portfolios for Learning*.⁷² Barrett explores the possibility of using Google applications to create a coherent online portfolio, including using Blogger to maintain a learning journal, creating presentations on Google PageCreator and storing images on Picasa Web Albums.

However, whilst the portfolios created directly from the MOSEP project were multimedia-rich and did include examples of Web 2.0, there was no evidence to suggest that schools were moving towards e-portfolio mash-ups.

9.2.7 How does MOSEP promote social inclusion?

The target audience of the MOSEP project are teachers, trainers and vocational counsellors who work with young people that are at risk of dropping out of the educational system in the transitional period between secondary education and further education. It is crucial that they are trained in how to deliver the e-portfolio process in order to close the digital gap between technology-savvy students, or 'digital natives', and their teachers and vocational trainers.

⁷¹ The MOSEP study, p.66 (October 2007).

⁷² Barrett, Helen (28th Sept 2007) ePortfolio Mash-up with Google Apps, <http://electronicportfolios.org/blog/2007/09/eportfolio-mash-up-with-google-apps.html>, last accessed 3rd November 2008.

By focusing students on the positive aspects of their learning, an e-Portfolio helps a student to invest in their career or further education. Students who are ‘at risk’ can identify their skills, and areas where they can achieve. This enables them to feel valued, not only by the school, but also by their peers, as students share work and portfolios for the purpose of peer-assessment. This can then help them to be self-directed learners, capable of making informed decisions about their future.

9.3 MOSEP: outcomes and impacts

9.3.1 What was the extent and pattern of user involvement in MOSEP?

The project was coordinated by Salzburg Research in Austria and involved 9 partner institutions throughout the EU in Austria, Bulgaria, Germany, France, Lithuania, Poland and the UK, which involved schools, universities, teacher training colleges and universities, as well as educational research facilities and youth organisations.

In Wolsingham School and Community College, after a successful development of their own E-Me project in 2004-6 and their involvement in the MOSEP project which helped to streamline the process, the project was rolled out to all years of the school and electronic portfolios have been noted as one of the school’s ‘Long Term Aims 2008-11’⁷³ after a very positive Ofsted inspection in 2007. The school is the ‘focal point’ of a small community of 5000 people in rural Wales and has a student population of 790 pupils.⁷⁴

In the testing phase, teachers and trainee teachers used the MOSEP course to develop their own electronic portfolios. Many updated the portfolios regularly, with 22% of users updating their portfolio more than once a week, 56% of users updating their portfolio once a week and 22% of users updating their portfolio about once a month.

9.3.2 In what main ways did participating in the initiative benefit users?

MOSEP describes the benefits to users of electronic portfolios as a method for ‘self-directed’ life-long learning:

- to better develop their skills and competences;
- to identify and reflect on their strengths and improvement;
- to improve their self-presentation skills;
- to become aware of their potential and in this way foster self-esteem;
- to continue their school career or vocational training.

By focusing students on the positive aspects of their learning, an e-Portfolio helps a student to invest in their career or further education. Students who are ‘at risk’ can identify their skills, and areas where they can achieve. This enables them to feel valued, not only by the school, but also by their peers, as students share work and portfolios for the purpose of peer-assessment.

⁷³ Crawshaw, Andrea, Long Term Aims 2008-11’ (June 2008).

⁷⁴ Wolsingham School and Community College Ofsted Inspection Report (November 2007).

It is also a mechanism for improving teaching, making lessons more dynamic and exciting and giving students more control, since they can share work with their peers and give and receive feedback, are responsible for deciding what their achievements are,.

“For my learners - teacher trainees - it has certainly led towards making their own teaching more attractive to the age group they will be teaching (10-14 year-olds).” (MOSEP partner)

Teachers who use the MOSEP course can benefit by becoming part of a community of practice and contribute to and share information on blogs and wikis, as well as work with other practitioners and learn from their experiences. They can use the MOSEP toolkit and resources.

It is also important for teachers to develop their own electronic portfolio in order to understand the process in-depth and to help them develop their own competence profile. Many of the SAQ responses from the testing sites indicate that the greatest benefit of participating in the MOSEP project was having created their own electronic portfolio. This illustrates how valuable a tool it can be in increasing motivation and self-esteem. This is equally true of the target inclusion group, students age 14-16, as in Wolsingham School and Community College, 93% of students said they felt ‘proud’ of their electronic portfolios.⁷⁵

Other benefits highlighted by teachers and trainees from the testing phase included:

- *“learning to use computers more efficiently” (SAQ comment);*
- *“to motivate my pupils to work with e-portfolios” (SAQ comment);*
- Using WikiEducator, Mahara and other software.

9.3.3 What kinds of ICT skills and competences have been supported by the initiative, and did these include ‘higher level’ ICT skills?

The MOSEP course provides teachers and trainers with the skills they need to be able to ‘keep up’ with young learners, the ‘digital natives’, and focus their learning in a way which not only recognises, but also capitalises on the new ways in which young people learn through social networking and other Web 2.0 tools. They need to develop advanced digital skills and be able to incorporate Web 2.0 technologies for learning. When using e-portfolios with their students, it is important that teachers and trainee teachers have also been through the process and compiled their own e-portfolio, so that they have a similar digital skill set to their students. As one SAQ response illustrates, closing the digital gap in teaching and learning is crucial:

“They would already have computer skills when beginning with their ePortfolio, otherwise they have major problems when working on the portfolio. This was especially the case with the teachers training group and it was much easier with the use in class with students.” (MOSEP partner in the testing phase)

⁷⁵ Pallister, John, Implementing a Multimedia E-Portfolio to Support Learning, Achievement and Progression (2006) <http://www.e-me.org.uk/resources/EuroPortfolioOxford.pdf>, (last accessed 22 October 2008).

Amongst trainee teachers and teachers in the partner institutions, 55% of users ‘agreed’ or ‘strongly agreed’ that the project improved their basic ICT skills and 76% ‘agreed’ or ‘strongly agreed’ that it helped them to do more complex digital tasks like social networking. During the MOSEP project, both project partners involved in developing the course, and teachers and trainee teachers who used the tools during the test phase, had the opportunity to develop both basic and advanced digital skills, through the use of web-based learning and collaboration in wikis and blogs and using the Moodle platform.

As discussed in Section 9.2.6, MOSEP uses Web 2.0 approaches such as open-source wiki platform, FlashMeeting, bookmarking and tagging, SlideShare, Flickr, RSS feeds and blogs. This media-rich environment promotes the development of higher level e-skills. Throughout the MOSEP course, learners were able use the Mahara e-portfolio software and develop their skills. As one of the testing partners notes:

“Sometimes even IT-literate learners were not familiar with Web 2.0 tools and learned how to use ePortfolio software professionally.”

Students in the E-Me project at MOSEP partner site Wolsingham Community College were taught how to use Mediator 8, a multimedia authoring software. In a 2005 questionnaire, 75% of students agreed that *“by working on my E-Me I have developed useful multimedia skills”*. In 2006, 90% of students felt that this was the case.

However, students can also run into difficulties here, and become disengaged when software is not straight-forward and easy to use. In 2005, 35% of students involved felt that the E-Me was *“too complicated for me to use”*, decreasing to 12% in 2006 as the school streamlined the process. In MOSEP, many users had technical difficulties with the Mahara software which were ‘off-putting’. Equally, users can become disengaged when the software cannot do something that a student with more advanced skills might want it to. There is certainly a compromise that must be reached between functionality and usability, challenging existing skills and developing new skills.

9.3.4 Did the initiative help users learn other skills? (e.g. ‘soft’ skills like citizenship; self-esteem)?

The MOSEP project aimed to increase learners’ self-esteem through the e-Portfolio process and there is evidence that this definitely happened. Amongst trainee teachers and teachers in the partner institutions, 78% of users ‘agreed’ or ‘strongly agreed’ that taking part in the project improved their self-confidence. More importantly for adult learners, 89% of users ‘agreed’ or ‘strongly agreed’ that the project helped them to develop networks that provide opportunities. Working collaboratively ensured peer support and the creation of professional networks.

Project partners agreed that in their test groups, the e-portfolio contributed to learners’ personal development in the following ways:

- increasing confidence;
- increasing motivation;
- expanding social networks;
- better relationships with peers;
- more interest in their learning.

Through the process of putting together an e-portfolio, students become more involved and more engaged in their learning by giving them a focus. Selecting and collating relevant ‘evidence’ to show their learning gains increases motivation to do well. The e-portfolio can be used as a tool for formative self evaluation and reflection that is owned by the learner, which in the process of creating it, can also improve the learners confidence and technical skills.

9.3.5 Did MOSEP equip users with skills that will increase their labour market opportunities?

For those involved in the MOSEP project partner institutions, 78% of respondents felt that their work on the e-portfolio improved their qualifications. This may be because they were able to include the module as part of their teacher training. Conversely, not many people felt that taking part in the project was relevant to their job prospects (56% no opinion), with only 11% agreeing it could ‘contribute to improving job prospects’ and 33% disagreeing that this was the case. However, from further SAQ responses it is evident that taking part in the project provided additional skills for teachers seeking employment who will now have valuable knowledge and experience with e-portfolios to offer schools or organisations unfamiliar with the process. As one teacher notes, *“it is an excellent tool for developing a teacher’s competence profile”*.

For 14-16 students, the MOSEP study discovered that collaborating with or enlisting in the support of businesses and external expertise helped learners to understand their skills in terms of the labour market and how they might make decisions about their future careers. Furthermore, e-portfolios are a way of encouraging young learners to develop their analytical thinking skills as well as the ability to evaluate not only their work, but also the work of their peers. The creation of an e-portfolio is a powerful tool which serves to increase user employability. However, this is mainly only the case if the e-Portfolio is used in an interview situation where the learner is present to explain their portfolio, outlining the learning they achieved and the strategies which helped them achieve their goals.

9.3.6 What has been the contribution of MOSEP to broader social inclusion objectives?

MOSEP has contributed greatly to the wider e-portfolio debate and has provided a detailed study and in-depth course which are freely available for others to use, and more importantly, can be adapted to any organisation and age group. These valuable resources are important tools for schools or organisations who do not have time to carry out their own research or the budget for expensive training, to help themselves target early school leavers by building self-esteem. As Project Coordinator Wolf Hilzensauer states, the social impact how others can develop and build upon the experiences of the project:

“People are talking about it [MOSEP] and based on our research and our model and experience people are implementing e-portfolio and self-organised learning scenarios in their institution. People refer to our course and our study, even if they don’t really use our results and materials they use the ideas that we developed...people are now adapting the concept to their needs.”

9.3.7 In what ways did the use of Learning 2.0 contribute to institutional and organisational changes?

The main impact on organisational cultures is the changing role of the teacher and the school. Teachers become ‘learning companions’ who facilitate independent learning and peer assessment during the portfolio process. Ownership is also a key issue which many teachers initially find difficult. The e-portfolio belongs to the learner and they can choose to share it, or parts of it, with whom they like. This may mean that some sections are shown only to peers, whilst others only to a family member. It may be that the teacher does not even see the final result if that is what the student wishes. The teacher’s role becomes one of support and guidance.

In her web article, *Authentic Assessment with Electronic Portfolios using Common Software and Web 2.0 Tools*, e-portfolio expert, Helen Barrett, discusses the ways in which Web 2.0 technologies take the traditional idea of a portfolio forward, bringing the focus away from a data-driven record for standards and accreditation, and moving schools towards being learner-driven and learner-focused environments.

ePortfolios 1.0	ePortfolios 2.0
Hierarchical, Designed	Networked, Emergent
Metaphor: Portfolio as Checklist	Metaphor: Portfolio as Story
Data-driven	Learner-driven
Focus on Standardization	Focus on Individuality, Creativity
Feedback from Authority Figures	Feedback from Community of Learners
Large, complex systems	Small pieces, loosely joined - "Mash-ups"
Web-based Form	Blog and Wiki
Positivist	Constructivist, Connectivist
Accountability-driven	Learning-focused
Proprietary	Open Standards
Digital Paper (text & images)	Digital Story (multimedia)
Local Storage (hard drives, CD)	Network Storage (Lifetime Personal Web Space)

Fig. 9.4: e-Portfolios 1.0 vs. e-Portfolios 2.0, Helen Barrett (2006)

In this new environment, e-portfolios are also excellent tools for monitoring, or at least recognising, informal learning. So many aspects of informal learning can be captured through Web 2.0 and in particular, social software, which MOSEP sees as a key element in combining informal and formal competencies:

“Social software has been one of the driving forces behind the adoption of e-portfolios for learners in bringing together learning from different contexts and sources of learning and providing an ongoing record of lifelong learning, capable of expression in different forms” (Hilzensauer et al, 2007, p.37)

In this respect, Web 2.0 has the potential to dramatically affect the way students learn, and the way teachers teach, creating organisational changes in the way the curriculum is formatted, how lessons are structured and how students are assessed.

At a wider level, through working with so many EU partners, the MOSEP project was able to shed light on how e-portfolios are viewed across the EU, highlighting its potential for use on a national scale or even international scale. For example, Wales has embraced the idea of e-portfolios as a national initiative for all citizens, seeing it “*a life-long learning passport delivered online to liberate latent talent from within the community and transform Wales into a ‘Learning Country’.*” (National Assembly of Wales⁷⁶).

9.3.8 Overall, to what extent were the intended learning and inclusion outputs, outcomes and impacts of MOSEP realised?

- MOSEP successfully managed to raise the profile of e-portfolios and provided useful outputs and resources for use by other institutions hoping to start their own e-portfolio scheme. The project has been well-received and noted by other ‘experts’ in the field.
- Despite the difficulties involved, the partners of the MOSEP project managed to work together using Web 2.0 technologies to collaboratively create an open-source e-portfolio wiki course and accompanying resources, available in five different languages.
- Teachers and trainee teachers involved in the project were able to develop their own e-portfolios and help their students create e-portfolios.
- Students involved in the partner institutions learned how to collect and organise evidence for their e-portfolio, make choices about what to select and omit, as well as reflecting on and evaluating their own work as well as the work of their peers.
- The long-term goal of lowering drop out rates was not fully realised as the scope of the project focused more on increasing teacher competency and digital skills:

“We assumed that e-portfolio method would be good for people in their adolescent phase when they have problems with the transitions from one educational system to the other. We wanted as a long-term goal to lower school drop-out rates... but we only indirectly tackled this problem by sensitising teachers to help their students develop skills and self-esteem in being aware of their own learning and competencies. We did not focus on this directly and we did not evaluate it as such.” (W. Hilzensauer)

- At Wolsingham School & Community College, students received the E-Me Project very positively. 93% of students felt ‘proud’ of their E-Me portfolio, 81% felt that it helped them to ‘record what I have learnt and done’, 64% ‘enjoyed’ working on their E-Me and 67% felt that they would continue using and developing their E-Me without school involvement.

⁷⁶ Career Wales Online, <https://www.careerswales.com/home.asp>.

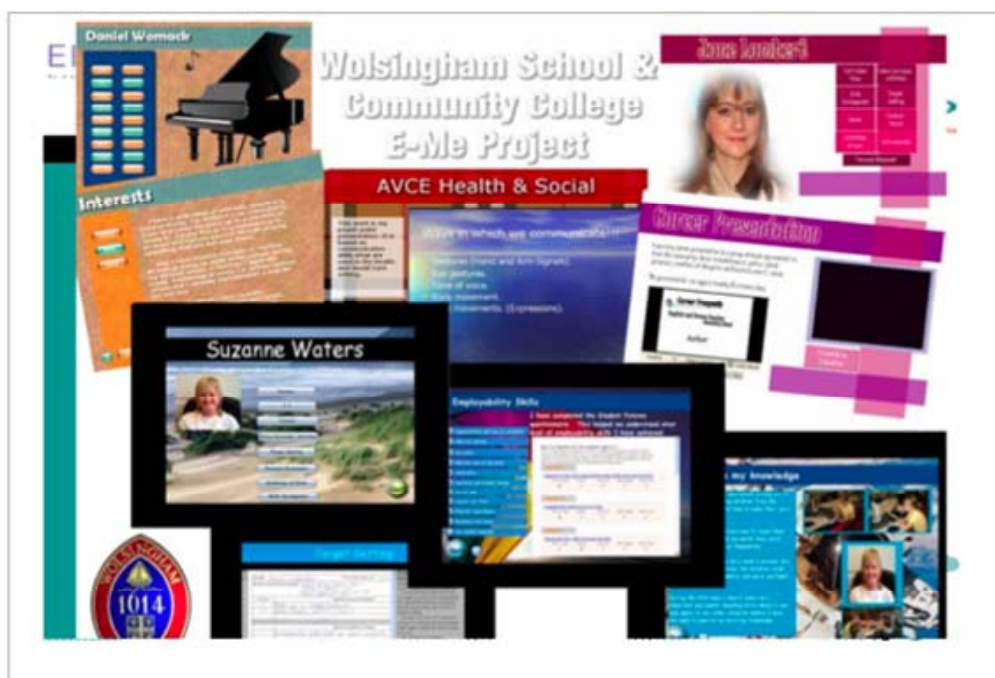


Fig. 9.5: MOSEP presentation slide: examples of e-portfolios at Wolsingham School & Community College from their E-Me project.

MOSEP partner, John Pallister's response to a Pontygyngu blog entry on 'Learning about e-portfolios' illustrates the extent to which the aims and objectives of the project have been realised for Wolsingham School and Community College:

"The project has taken me through a very steep learning curve, from knowing about Social Software and Web 2 tools to being able to employ them in my everyday practice. I regularly communicate and collaborate with teacher and lecturers across Europe. [...] I believe that every student I have taught during the past 18 months has benefitted from my involvement in the project, they have seen me use Skype, Blogs, Social Bookmarking and Wikis, naturally. My activities have prompted many discussions about digital identity etc. and many of my students have either communicated face-to-face or via Skype with colleagues from many European countries. [...] The project has helped me to develop my thinking on ePortfolios and has forced me to develop my understanding of the relationship between the ePortfolio Process and the Learning Process. I am now even more convinced of its value and regularly contribute to online discussion about ePortfolios".⁷⁷

However, Pallister notes some reservations about focusing too greatly on tools and technology rather than the process of using electronic portfolios to support learning.

⁷⁷ Pallister, John (13th Jan 2008), Learning about e-portfolios, <http://www.pontydyngu.org/2008/01/learning-about-e-portfolios/>, accessed 15th October 2008.

9.4 MOSEP: Success factors and barriers

9.4.1 What kinds of problems and obstacles have been experienced and how have these been addressed?

- **Technical issues:** The most persistent problems have been technical issues. Initially in developing the wiki course materials, partners lost all wiki content in the first software upgrade. There were also problems with browser compatibility and bugs in the Moodle platform which were frustrating to users and slowed progress. Teachers and trainers also reported numerous problems using Mahara e-portfolio software with their user groups.
- **Meeting diverse needs:** MOSEP aimed to develop an adaptable and flexible course to meet a range of different needs and requirements:

“The problem was that we were dealing with different educational environments, different educational cultures, different target groups and settings, different age and language groups. The difficult thing was to find one didactical solution, which is as wide and as open as possible, but which is also as concrete as possible in terms of supporting the teachers.” (W.Hilzensauer)

By designing a stand-alone course on an open source wiki which does not require specialised trainers to deliver it, MOSEP was able to address this problem.

- **Cooperation:** Working with so many partner institutions to design the training course was difficult. However, the use of Skype as well as Web 2.0 technologies such as blogs, wikis and RSS feeds enabled them to work together.
- **Student ‘buy-in’:** Some learners were still not completely convinced of the value of the e-Portfolio and struggled with structuring and planning their evidence. It is vital that students see the portfolio as a means of organising and directing their own learning, rather than simply as another way for the school to assess them.
- **Teacher ‘buy-in’:** Some partners struggled to get teachers interested in the project as they thought it may create extra work for them:

“It was extremely difficult to find teachers in the same class to support the students' portfolios by giving them comments and feedback.” (MOSEP partner)

However, using Web 2.0 formats, students can give feedback on each others' work.

- **Privacy:** One response to the SAQ raised some concerns over the privacy of the information contained in the e-Portfolio and the user felt anxious about the security of personal details. Schools certainly must carefully consider the merits of sharing portfolios for feedback and collaboration with businesses, e.g. for work experience, and security of information.

9.4.2 Has the initiative created things that were unexpected, or things that have had negative outcomes?

If not implemented effectively, an e-portfolio program can cause some students to lose motivation, as they may be unable to identify any of their own positive skills or achievements, and see it as another indicator of their ‘failings’. It must be approached in the right way and is ideally suited to teachers working with smaller groups, rather than large classes, as they can help to guide students through the process and help them to become self-directed learners. The MOSEP study identifies that the promotion of the portfolio project is extremely important, and that student buy-in and motivation can be encouraged by showing students examples of best practice:

“Students need to see good examples of electronic portfolios, understand their benefits, and know how they will help students to develop as learners and ultimately gain employment. Students are motivated to work on their portfolios when they can see what they will get out of the experience.” (Hilzensauer et al 2007, p. 24)

9.4.3 What factors have contributed to the success of MOSEP?

The main success factors are as follows:

- Collaboration between many different partner sites in the EU allowed MOSEP to develop in-depth study and state-of-the-art resources in the field of electronic portfolios, which take into consideration the experience, knowledge and expertise of different research and educational organisations throughout Europe.
- Presenting the course in an open-source semantic wiki, which will constantly evolve and incorporate new tools, technologies and strategies means it can be adapted by any institution regardless of their requirements.
- The use of a semantic wiki which encourages dissemination of the project throughout Europe.

9.4.4 What lessons can be learned?

The main lessons to be learned from the case study are as follows:

- The use of electronic portfolios in schools can encourage motivation to learn and help students direct their own learning and make choices about their future.
- Collaborative projects on a large EU-scale can be facilitated by Web 2.0 technologies.
- Addressing the need of the teachers and trainers will help to bridge the gap in digital knowledge between school learners and their teachers. Teachers and trainers of the course should develop their own e-portfolio, which helps them to understand the process and have a shared experience of it with their learners, rather than just relay the method.
- Currently, the use of lower-level Web 2.0 technologies such as wikis and blogs in e-portfolios are more valuable to learners, yet the trend will move towards mash-up applications which incorporate many different Learning 2.0 tools.

10. Schome

schome

Are you looking for something to do? Something that will **challenge** you? Give you a *new perspective* on learning?

Maybe you want to **meet new people**, and to **take on a new persona**?

Schome Park gives you the opportunity to **take control of your learning**. To explore the virtual world of Second Life and to do all of the above.

If you're interested in joining a welcoming community of 200 teens and staff, e-mail: schome-sl-help@open.ac.uk



www.schome.ac.uk

Fig. 10.1: Promotional flier for Schome Park encouraging new members to join the community

10.1 Data Collection

Data collection activity	Specification (type of data collected; numbers involved)	Profile of respondents/users (age group; gender; learner type; inclusion type)
On-line data capture	<p>Forum postings on the Schome Park project (247 topics, 5000 postings since October 2006)</p> <p>Forum postings on Schome (411 topics, 4185 postings since September 2006)</p> <p>Schome Park blog (18 entries May – November 2008)</p> <p>Schome Park blikis:</p> <ul style="list-style-type: none"> Phase 1 bliki (October 2006 – May 2007, 29 entries) Phase 2 bliki (16 May 2007 – 16 December 2007, 28 entries) Phase 3 bliki (January – May 2008, 40 entries) <p>SchomeBase bliki (July 2006 – February 2007, 26 entries)</p> <p>Individual blikis/blogs and SLogs (6 users, over 61 entries)</p> <p>Wiki (5,150 total pages with 931 'legitimate content' pages, 2,234 files uploaded, 25,342 page edits, accessed 124,639 times by November 2008.)</p> <p>Schome Park YouTube channel (joined: July 2008, 109 channel views, 22 videos, 6 sub-</p>	<p>Users are mainly students involved in Schome Park discussing community decisions and activities. There are also postings from adults and teachers involved in organising and participating in the project; researchers; project administrators.</p> <p>Some students set up their own pages within the Schome Park wiki, detailing their experiences and posting 'snapshots' of their time in SP.</p> <p>The Blip.tv channel was set up to broadcast the Schomers Machinima projects. (http://schomepark.blip.tv/)</p> <p>Users: educational experts and stakeholders interested in virtual education. A Facebook group was set up for 'pre and post-conference bonding' which has 72 members and Flickr group. (http://www.open.ac.uk/relive08/)</p>

	scribers) Blip.tv (9 videos)	
Key informant interviews	1	Project Director, Open University.
Focus Groups	/	Schome Park is currently inactive.
SAQ	6 SAQs of Schome Park students, Schomers.	Age group: 13-17. Many of the respondents are believed to be those from the first phase of the project, who helped to build the community and have remained throughout its duration.
Other interviews	/	
Observation	/	SP is currently inactive.
Content analysis	Webcasts; BlipTV (9 videos); 4 reports; 6 articles; Newsletter; promotional flyer	

10.2 Case profile

10.2.1 Schome Park in a nutshell

The Schome Park teen Second Life Project aims to use virtual worlds to explore new educational possibilities. Through co-learning, the project seeks to establish a genuine and inclusive learning community where students and teachers are able to learn from each other and contribute to developing a vision of what ‘the education system of the learning age’ should be like.

During their time in-world, students have the opportunity to help design and build their learning environment, attend sessions which address subjects not normally taught in schools, such as Artificial Intelligence, Archaeology, Machinima, Research and Philosophy and Ethics, as well as more conventional subjects like Physics, Media and Languages. Students can also create their own groups and run sessions.

The project aimed to help the students involved to develop their knowledge age skills, in particular: communication; teamwork; leadership and creativity. These were measured during the Pilot phase using a *knowledge age skills* framework developed by National Association for Gifted and Talented Youth.

The first three phases of the project are complete but the wiki and forum are frequently updated and there are currently some students still in Schome Park, continuing the initiative without staff for the time being and helping to write up research papers on the previous phases of the project.

10.2.2 How and why was Schome started?

As part of the wider Schome program, (not school – not home – Schome), Schome Park aimed to develop ideas about future education through using virtual worlds to explore scenarios that would be difficult or costly to establish in ‘real-life’. The planning stages



Fig. 10.2: The Japanese garden in Schome Park

of the project began at the Open University in late 2006 and the National Association for Gifted and Talented Youth (NAGTY) sent a call out to its students through online forums and face-to-face meetings, looking for students interested in joining the project. During this time, the teachers, mentors and researchers who were to be involved in the project spent time familiarising themselves with Second Life and in building the basic environment for Schome Park. In January 2007, 149 NAGTY students returned signed consent forms from parents or guardians and joined the pilot phase, which lasted until May 2007.

As described by the Schome Park wiki, the main goals of the project were:

- To explore the educational potential and pitfalls of Teen Second Life (it was the first project in Europe to do so);
- To develop the knowledge-age skills of participants, specifically: communication, confidence, creativity, leadership, motivation, problem solving and teamwork;
- To try out alternative approaches to supporting learning to inform our thinking about visions for schome (the education system for the information age).

There have been three phases of the project so far:

Phase 1: The Schome/NAGTY Pilot, January – May 2007. Members from NAGTY were asked to join and NAGTY actively sought to recruit members who were underperforming at school.

Phase 2: June – December 2007. It included some of the original NAGTY students plus new students who were more representative of the student population as a whole. During Phase 2 the first group of students from the USA joined the project.

Phase 3: January – May 2008. It included some of the original students from Phases 1 and 2, and introduced classes of students and their teachers. More students from the USA joined the project.

10.2.3 In what ways has Schome changed?

As a research project the initiative experienced many changes throughout the three phases. The three major changes were i) user profile, ii) level of staff involvement and iii) student responsibility and approach to learning.

- **User profile:** Phase 2 tried to address the criticisms that Phase 1 of the initiative had been successful because of its user profile of gifted and talented students. Schome actively recruited students from pupil referral units and a broader spectrum of students were introduced to Schome Park. In Phase 3, as the community was already established, Schome began recruiting groups of students and their teachers.
- **Level of staff involvement:** The first phase of the initiative was more structured with a higher level of staff involvement. In Phase 2, students there was less staff-led activity and students were given more freedom to manage their own learning. Whilst the students had many ideas about this, they needed more support in carrying out the activities. Consequently, in Phase 3 there was greater emphasis on staff-led activity whilst maintaining student-led activities.

- **Student responsibility and approach to learning:** Staff noticed that students initially had a very individualistic attitude to their learning and what they could gain from the project. They worked on their own to create Second Life objects and took personal ownership of these objects. Staff gradually encouraged students to shift their focus away from what they wanted to do as an individual to look at what the community needs. Students were given greater control and responsibility over the governance of the island. Schome Park island is allowed a limited number of prims, which are the objects that make up the environment, and students had to work collaboratively to manage the number of prims and settle disputes about what was most beneficial to the community.

10.2.4 How is Schome funded?

Phase 1 was funded by NAGTY and the Innovation Unit. Phase 2 was funded by Becta. Phase 3 was funded by The Centre for Research in Education and Educational Technology and the Pedagogy, Learning And Curriculum Research Group (both at the Open University). The cost of purchasing an island in the teen Second Life grid is \$850 with an additional \$150 a month for land use.

10.2.5 Who is involved?

The project involved the students, referred to as Schome Parkers or Schomers, as well as teaching and research staff. In Phase 1, 149 members of NAGTY (ages 13-17) were involved in the project. Figures are not yet available for the subsequent phases.

Type of involvement	No. of adults
Director	1
'Consistently active'	8
Active at particular times (e.g. Phase 1)	24
Limited activity	14
Inactive	24
Signed up but did not create an avatar	15

Fig. 10.3: Adults involved in Schome Park (2006 – 2008)

Throughout the course of the project (from the end of 2006 to mid 2008) around 70 adults were involved as Schome Park staff. Initially, Schome employed PhD students from across the Open University for a maximum of 6 hours per week each. However, due to reduced funding the project became increasingly reliant on volunteers. Volunteers came from a broad range of academic backgrounds, bringing with them a diverse range of specialist knowledge. Other contributors included parents, policy makers, academics, students, home educators, employers, teachers and other practitioners from around the world. The emphasis on Schome as an Open University project was deliberately lessened to promote inclusiveness and encourage the involvement of contributors from other organisations. The staff structure was more a loose alignment of supporting adults rather than a hierarchical body.

10.2.6 What Learning 2.0 tools and approaches are used?



Fig. 10.4: The Schome Park wiki

The use of the Second Life platform as an educational space can be considered a Learning 2.0 technology. Through using Second Life students and staff were on more of an equal footing and could build a community together. This community aspect was further enhanced by the Schome Park wiki and the Schome Park community blog, where all involved could discuss issues and make collective decisions. Evidence shows that the students who developed observable progress were the students who contributed to all three aspects of the project, those who engaged with Schome Park and who spent some time in the forums and wiki discussing and analysing tasks and activities.

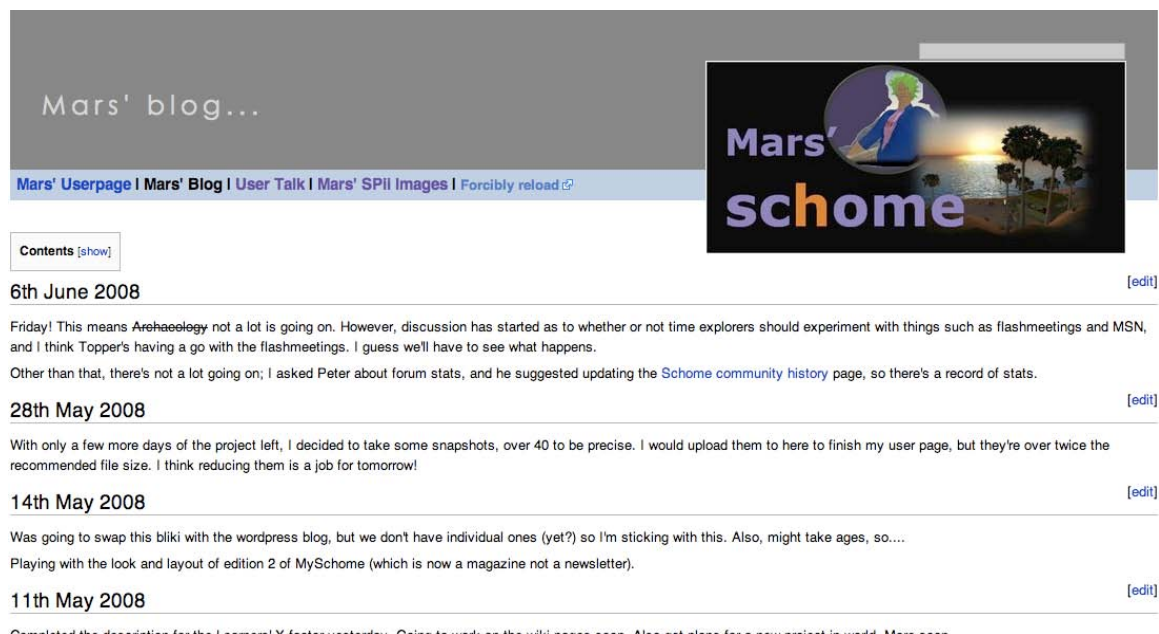


Fig. 10.5: An example of a Schome Park blog

A significant number of students wrote some form of blog to record their learning experiences during the project. Standard blogs, SLogs (blogs which allow users to send messages and images from within Second Life and blog as their avatar) and blikis (blogs in wiki format which can support collaborative input) were key aspects of the individual learning process and enabled users to reflect on their involvement in the initiative. In these blogs, students could store ‘snapshots’ of Schome Park and receive comments and feedback from other users.

Many students were also greatly involved in Machinima, in creating Second Life filming projects. With these 3D real-time animations, students work together in different roles - script-writing, filming and acting – much like in a real-world film/animation project. These films were collated on Schome Park’s Blip.tv and YouTube channels along with other non-Machinima videos created by Schome Park students. Some students also set up their own internet radio station that was streamed into the island.



Fig.10.6: The Schome Park Blip.tv and YouTube channels

10.2.7 How does Schome promote social inclusion?

The project has supported, and continues to support, students from the National Association for Gifted and Talented Youth, who were identified by their schools as underperforming despite being ‘gifted’. Within this group, who joined the project at the Pilot phase, 23% of students were from socially disadvantaged or ethnic minority backgrounds who are currently under-represented in higher education (GOAL).

Gifted and Talented students, although often seen as unproblematic, frequently have difficulties in social interaction and may become isolated and marginalised at school. In some cases, students experience severe bullying. Through participating in a virtual world, it is hoped that the use of an avatar will allow students to increase their self-esteem and their abilities to socialise and interact, without discomfort about physical appearance or awkwardness. Some students in the project have been identified as being on the Autism spectrum, for whom face-to-face communication is very difficult, and who find the text based chat in-world very liberating as they do not have to read people’s body language or facial expressions.

In later phases of the initiative, Schome attempted to broaden the profile of the student population. In Phase 2, Schome Park actively recruited students from pupil referral units with behavioural problems at school to investigate whether an unconventional learning

community with completely different cultural norms to school, could help them to re-engage in their learning. However, many of these students were hard to engage in the project and it required a disproportionate amount of staff time and effort to help keep them involved. The ‘inclusive’ aims of the project in looking for an educational solution for the future, advocated that the scheme should not fail any child.

10.3 Schome: Outcomes and impacts

10.3.1 What was the extent and pattern of user involvement in Schome?

User participation in Schome Park was closely monitored and evaluated by the Open University team and evidence is available in the Schome-NAGTY Second Life Pilot Final Report (May 2007) of the level of engagement of students in the first phase of the project:

68% of users logged into Schome Park at least once in the duration of the project and 41% of total users spent more than 1 hour in-world; 23% of users accounted for 93% of all time spent in Schome Park. The user group was 52% male, 48% female and both used Schome Park fairly equally. Under half (42%) of users logged into the accompanying wiki and 39% edited the wiki at least once. The accompanying forum proved to be less popular, with only 25% of users posting one or more messages. Research staff noted a positive relationship between time spent in Schome Park and use of the wiki and forum.

There was a significant difference in engagement of members of the GOAL cohort (students currently underrepresented in higher education from ethnic minority or socially disadvantaged backgrounds) and non-GOAL members: Only 15% of GOAL students spending more than 1 hour in-world compared to 49% of non-GOAL students. Only 15% of GOAL members logged into and edited the wiki and only 3% of GOAL members posted at least one message on the forum. The Schome research team felt that this difference was due to ICT accessibility, as GOAL students were less likely to be able to access Schome Park from home, due to not owning a computer or internet access, and were limited to using it during school hours.

Unfortunately data is currently not available for the second and third phases of the project but anecdotal evidence suggests that the core group of students who remained until the

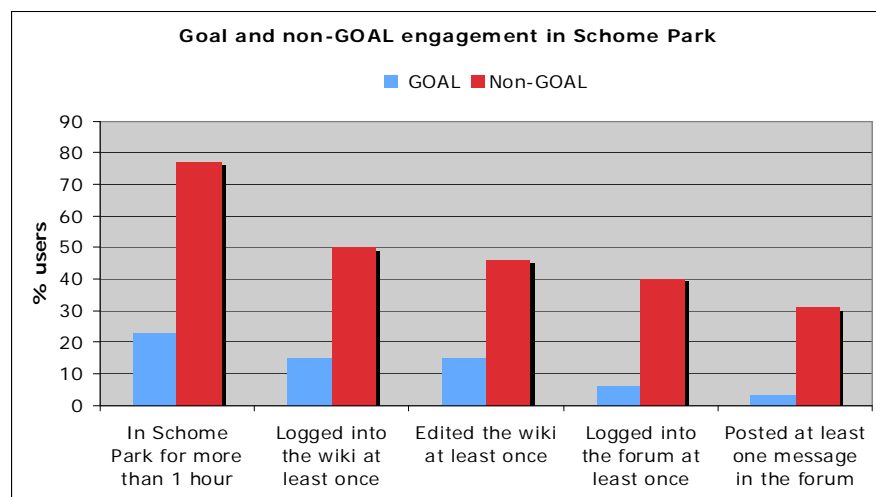


Fig. 10.7: GOAL and non-GOAL engagement in Schome Park

end of the third phase were those who entered Schome Park in the pilot phase and helped to build the environment and set up a community ethos. Many non-NAGTY students who entered in later stages did not engage as much or as quickly as original Schomers and staff found themselves spending a disproportionate amount of staff time was spent in trying to retain these students. Some presented behavioural problems.

10.3.2 In what main ways did participating in the initiative benefit users?

Through forum postings, wiki articles, student blogs and SAQ responses from students who have remained in Schome Park, users report a generally positive experience of taking part in the initiative. It can be said that users have benefited from the project in the following ways:

- **Personal development:** most users noted an increase in self-esteem, confidence and teamworking abilities. Through using forums and the wiki, they were also able to develop empathy and reflect on the opinions and ideas of others.

“Because I've got as much time as I want to compose a reply on the forums, I've become much better at diplomacy, and it's pushed my empathy a long way, improving it in doing so. Generally speaking, I can get on with people a lot easier on the forums and inworld, and that's carried over into my social skills in the wider world.” (SParker)

- **Social networking and communication:** whilst there is still plenty of scope for independent learning, most of the learning which took place in Schome Park was collaborative. Virtual worlds and their potential for social networking encourage collaborative learning by building up confidence through anonymity and informality.
- **Student-led activities:** The virtual environment holds endless possibilities for exploring, building, creating and even destroying, which creates enormous learning potential. Students were able to work independently or in groups to run their own activities to reflect their interests, such as the Schome magazine, chess competitions, a Regatta, a real-time music concert, building a steam engine museum, film projects and organising traditional teaching sessions like Philosophy and Ethics.

“Things began to improve themselves when we learned how to build properly, and started to think what could we do here... it really gave us a sense of responsibility, leadership, ownership, communications, critical thinking, civil thinking and as well as improving our mathematical / building skills.” (SParker)

- **Developing technical skills:** the use of Second Life requires users to develop advanced digital and design skills. Many students took part in Machinima projects and all developed Second Life skills. Students also used wikis, forums, blogs, Flickr and other Web 2.0 tools to document and disseminate their Schome Park activities.
- **Exploring virtual environments:** virtual worlds are not pre-defined spaces and can achieve the physically impossible. This proved particularly useful for students' archeology sessions, where they were able to re-enact the sinking of the Titanic, build Roman roads and aqueducts and visit the Caves of Lascaux.
- **Unconventional 'curriculum':** Through involving PhD students from the Open University and volunteers from other establishments, Schome Park was able to offer a

diverse range of activities, such as Artificial Intelligence sessions. Students were able to correspond directly with specialists in the field.

- **Involvement in competitions:** Students were able to take part in real world competitions, such as the UKSC satellite competition. A group of students also came second in the Learners Y Factor competition and met up in London to give a presentation on their experience in Scheme Park archeology lessons.
- **Peer support:** There is strong evidence of peer support amongst users, helping each other to learn how to achieve things within the virtual environment: Users also leave each other feedback, for example ‘barn stars’ for good work.
- **Community:** One of the most striking aspects about Scheme Park is the real sense of community that has been built up by students and ‘staff’ alike. It is evident that Scheme Parkers work democratically and collaboratively. All of the SAQ respondents agreed that participating in Scheme Park helped them to feel part of a community.

10.3.3 What kinds of ICT skills and competences have been supported by Scheme? Did these include ‘higher level’ ICT skills?

Schemers developed extremely advanced digital skills through participating in the project. Whilst 79% of participants in the Pilot had never used Second Life before the project, most tried a range of Second Life activities and managed to achieve proficiency. These included basic skills like flying (which most felt they were ‘good’ at), walking (‘excellent’) and chat (‘good’), to more advanced Second Life skills such as writing script and video Machinima (‘not so good’)⁷⁸.

As the students are constantly using and developing their digital skills and working at such an advanced level, they frequently experiment with new tools and technologies and employ Web 2.0 tools to facilitate organising activities. Some students expressed the possibility of using FlashMeeting to manage their Machinima project. Machinima projects appear to be extremely popular in Scheme Park, where several members will collaborate to produce a real-time virtual film which explores the use of camera angles and advanced Second Life techniques.

A significant number of students wrote some form of blog to record their learning experiences during the project. Standard blogs, SLogs (blogs which allow users to send messages and images from within Second Life and blog as their avatar) and blikis (blogs in wiki format which can support collaborative input) were key aspects of the individual learning process. The community aspect was further enhanced by the Scheme Park wiki and the Scheme Park community blog. Evidence shows that the students who developed observable progress were the students who contributed to all three aspects of the project, those who engaged with Scheme Park and who spent some time in the forums and wiki discussing and analysing.⁷⁹

⁷⁸ The Scheme-NAGTY Final Report (May 2007) – mean reported level of competence for identified Second Life Skills.

⁷⁹ The Scheme-NAGTY Final Report (May 2007).

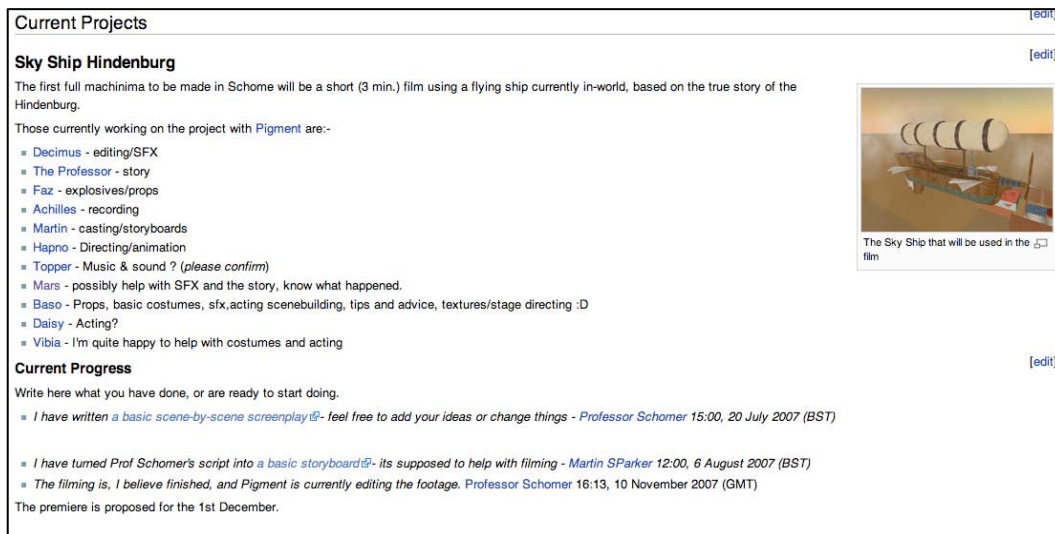


Fig 10.8 illustrates the organisation of a **Machinima project** on the Wiki, where Schomers arrange roles and responsibility, and record progress

10.3.4 Did Schome help users learn other skills? (e.g. 'soft' skills)?

There was clear evidence that users developed their knowledge age skills throughout the project, which were measured in the Pilot phase using a knowledge age framework devised by NAGTY. As detailed in the Pilot Phase Final Report (2007) students made notable gains in the following skills:

Communication: most demonstrated developments in communication skills. Schomers who participated in Schome Park as well as the wiki and the forum tended to show higher levels of communication skills, *'not least because this in itself required adapting communication for a range of settings and audiences'* (Peter Twining, interview). It was also recognised that students adapted their style of communication to different settings, adopting a more formal manner in learning activities or discussions about governance, and informal chat whilst moving around the island socialising.

For some students there is certainly evidence to suggest that Web 2.0 applications directly support social inclusion and allows them to develop communication skills in the virtual world that are transferable to and impact on their 'real' life:

One student admitted that she had difficulties in public speaking and would not contribute much in small groups or whole class discussions at school. In Schome Park, staff could help her lead group discussions through Private Messaging her with support, encouragement and suggestions of how to move the discussion forward. This boosted her confidence and communication skills and eventually she was elected as head of the SP government. Her confidence in Schome Park contributed to increased confidence in real school situations, where she now finds public speaking much less daunting. (Peter Twining, interview)

Teamworking: Schome staff found that students developed their 'perceptive listening' skills and moved from individualistic to more community-focused attitudes when they spent more time on Schome Park. This demonstrated the emergence of team-working and leadership skills as Schomers began to work in groups.

Leadership: Students were given greater responsibilities in Schome Park and as they began to work in groups, some students naturally started to demonstrate leadership qualities. Staff in-world helped students to develop ‘learner-led’ leadership styles rather than hierarchical.

Creativity: The use of a virtual world encouraged students to be creative and allowed them to develop their analytical thinking skills. Removing the formal barriers of traditional school environments and treating adults and staff as equals contributed to this as students felt more confident about asking questions and making mistakes.

10.3.5 Did Schome equip users with skills that will increase their labour market opportunities?

The initiative did not set out to help users with increasing their labour market opportunities but with the range of possibilities offered by Second Life, students were able to develop many transferable skills, in particular communication, working with others and problem solving. Students demonstrated organisation and leadership in coordinating activities, building the environment and upholding the community ethos.

Taking part in such an innovative research project has also been beneficial to participants in terms of the experience it has given them. It has enabled some students to participate in national competitions such as the Handheld Learning Conference ‘Learners Y Factor’⁸⁰ and the Space Experiment,⁸¹ which required Schomers to develop teamworking skills, delegate responsibility, research information and present results. These competitions are positive extra-curricular achievements that would be recognised by employers or further and higher education establishments.

In responses to the SAQs, 5 out of the 6 students said that participating in Schome Park has helped them to decide what they want to do in the future.

10.3.6 What has been the contribution of the initiative to broader social inclusion objectives?

The initiative is helping to contribute to research on the use of Second Life for educational purposes, which provides an excellent platform for inclusion. The project has also contributed greatly to the study of ethical issues relating to researching teaching and learning in virtual worlds. Schome’s broader aims are to develop an education system for the future which supports successful lifelong learning for every individual.

⁸⁰ ‘Learners Y Factor’ was an initiative supported by BECTA (the UK government agency set up to support on-line learning) to showcase innovative examples of young people using mobile and similar technologies in learning.

⁸¹ Space Experiment – contest, organised by the British National Space Centre (BNSC) and Surrey Satellite Technology (SSTL) in 2007 to get schoolchildren to design a satellite.

10.3.7 In what ways did the use of Learning 2.0 contribute to institutional and organisational changes?



Fig. 10.9: Schome Park

The use of a virtual environment greatly facilitates Schome's ethos of co-learning. The anonymity afforded by the use of an avatar and a login name unrelated to real life provides a greater sense of equality, a level playing field. This leads to a much more inclusive community, where, theoretically, participants are valued for their input. Age, appearance and qualifications are not central issues.

Since Schome Park is a research project, the boundaries were constantly changing and in the subsequent phases, there were many organisational changes within Schome itself. Whilst an equilibrium was established in the Pilot phase, and students and staff worked together to develop a Schome Park ethos, in Phase 2, in order to expand the population spectrum of the Schome Park, the project actively recruited non-NAGTY students and worked closely with PRUs (Pupil Referral Units) to bring in students who were seen to be problematic in mainstream schooling. However, these individuals coming into an established community with completely different cultural norms found it difficult to engage. Many left the project. In order to address this issue in Phase 3, groups of students and their teachers were brought into Schome Park. This led to a conflict between the rules of Schome Park and the rules of real-world classroom scenario, which was difficult for both adults and children to adapt to and challenged the status and the role of the teacher.

Equally the freedom of the virtual environment allowed the role of the learner to change throughout the project as well. During Phase 2, in order to maximise learner autonomy, there was also a significant decrease in staff-led activity. Whilst students had a greater role in the management and organisation of the project, they struggled with the lack of structure and showed a lack of focus correspondingly:

“The Schome community staff are very kind and supportive, they have organised some great things but it does strike me a little odd that the main thing going on in Schome Park II doesn’t actually seem to be teaching, although us Schomers (residents of schome park) are learning all the time, it seems to be more about Second Life’s interface, building and scripting instead of archaeology, ethics and philosophy, physics, languages, reading and writing and artificial intelligence. I’m sure it would work much better if as well as discussions there were more practical learning events.” (SParker)

This illustrates that due to the learning models and community ethos that had been established in the Pilot phase, as well as the endless potential for building and creating in the Second Life environment, students are still able to continue learning and developing knowledge skills even without structured activity.

10.3.8 Overall, to what extent were the intended learning and inclusion outputs, outcomes and impacts of the initiative realised?

In Phase 1 of the project, NAGTY wanted to assess the extent to which virtual worlds were more attractive to students than text-based forums. Evidence suggests that there was a higher level of engagement in Schome Park than on NAGTY forums.⁸² Throughout the project, teachers and researchers were able to realise their aims of investigating new teaching approaches.

Schome also achieved its aims in helping its students to develop their knowledge skills. The interests of the community had a powerful impact on the way learners developed their teamworking and leadership skills, becoming community-focused and learner-led.

Schome Park successfully managed to provide a positive learning experience for many of its members. The SAQ responses from the students still active in Schome Park were incredibly positive about their experiences. The fact that they are still participating in the initiative even though it is currently inactive clearly illustrates their level of involvement and their dedication to a community they have helped to create:

“It’s been an amazing experience, and to say it was only supposed to run for a few months, I think we’ve done really well to last 2 years!”

“It has really helped my learning and really really helped my social development.”

“It has been a life changing experience in my view.”

“It rocks, it really does.”

Unfortunately, despite its inclusive vision, Schome Park did not manage to engage all students and meet its inclusion aims, as figures from the GOAL cohort in the pilot phase demonstrate, as well as anecdotal evidence regarding students from pupil referral units at later stages.

⁸² Peter Twining (interview).

10.4 Schome: Success factors and barriers

10.4.1 What kinds of problems and obstacles have been experienced and how have these been addressed?

Technical: Second Life demands high bandwidth usage, which can potentially exclude users without a sufficiently fast internet connection and also requires users to have their own computer at home. These factors could be said to contribute to the “digital divide”. In Schome Park, this is thought to be why the GOAL cohort did not engage in the initiative as much as other users.

Students with basic or very poor ICT skills would struggle with the interface and some of the Second Life skills, although it has a ‘gaming’ aspect which is appealing and facilitates ease of use.

Whilst the quality of dialogue and engagement from students within the blogs/forums and wikis was generally deemed to be of a very high standard, there were problems regarding the actual functioning of those tools:

“I must admit I had avoided the wiki as much as I could, finding it very difficult to navigate.. I feel the main problem is having 3 homepages (the wiki mainpage / Schome Park mainpage / Second Life mainpage)” (SParker)

The Schome wiki contains over 710 pages of information, the maintenance of which requires a great deal of work on the part of the staff. Proposals have been made to consolidate three pages into one easier to navigate site.

Social/behavioural: Invariably there were disputes between students in the virtual world, often over the prims count. These conflicts were usually resolved without the need for staff intervention. Schomers stated that the forum provided a beneficial environment for the resolution of such issues.

Organisational issues: Some staff members felt that there was lack of support for staff development and they sometimes lacked the necessary technical knowledge to achieve more ambitious tasks. Some staff members expressed the need for greater coordination and direction and “*development of understanding of the Schome Initiative, strategic development of publications, etc*”. These problems were attributed to a lack of funding.

Challenging cultural norms: Some staff and students found it difficult to adapt their thinking to a new way of structuring education and re-imagining teacher-student roles. This was especially evident in the third phase of the project when established groups of students and their teachers joined the community. These students found it difficult to experience what Schome Park was really like as they were still behaving as if they were in a traditional school environment.

Measuring learning gains: Another issue involves formalising the informal aspect of learning in the project. It is difficult to monitor learning and improvement in-world as the expectation is that students have more freedom than in a traditional learning environment. Some staff felt that the project needed to establish links to the curriculum:

“If use of technologies such as SL are to become mainstreamed the most important barrier to overcome will be how to demonstrate learning. It is relatively easy to demonstrate skill acquisition but much harder to quantify learning against a curriculum

base. This will be the major challenge....how to embed learning through some form of curriculum base.” (Schome Park staff member)

10.4.2 Has the initiative created things that were unexpected, or things that have had negative outcomes?

In the Acceptable Use Policy (AUP) Schome anticipated that some users may become too involved in the initiative and advised its members - ‘Don’t overdo it!’:

“Participants should make use of Schome Park in a way that doesn't conflict with normal commitments such as homework and getting enough sleep. Most activities and group sessions are scheduled to last an hour.”

Despite this inclusion in the AUP, the obsessive nature of online-gaming and virtual worlds lends itself to immersive participation and some members of Schome Park admitted to spending too much time in-world:

“I know that SL took over my life for a bit, because it was new and exciting, which meant that I didn't go and see much of my RL friends, and I had to struggle through my school work so that I could get on SL. I've got past that now, but especially when using something like SL, which is stimulating and fun as well as education, and can become a bit all-consuming.” (Schome Park Student)

“At the start of the project I became addicted to it and it did effect my school work negatively for a bit, I seem to have shook it off but during boring bits of revision I'd much rather be here.” (Schome Park student)

“I know that me and my parents had to have an agreement [about Schome Park] because I went on too much. The agreement now is that I go on 2-3 times a week, instead of every night for hours at a time.” (Schome Park student)

10.4.3 What factors have contributed to the success of Schome?

The success factors of the initiative can be seen as follows:

- The learner-led educational approach which challenged the roles of teachers and learners.
- Using the Second Life platform as a means of exploring educational possibilities which benefits users in the following ways:
 - It is a flexible space that can be quickly adapted to suit the needs of learners;
 - It removes the physical barriers to learning: learners do not have to feel hindered by appearance or poor social skills;
 - It can allow students from different countries to work together;
 - It is particularly good for co-learning as virtual worlds are new to most and not yet fully understood, therefore social and cultural norms can be redefined;
 - It is cost-effective: ideas are easy to model in Second Life and are free to set up. Students are able to set up radio stations, make films, produce magazines and successfully carry out many projects which would require a huge amount of resources in real life;

- It encourages to teachers to take more risks with innovative teaching practices.

10.4.4 What lessons can be learned?

The lessons that can be learned from the case study are as follows:

- For research purposes, Second Life is an ideal platform for exploring new learning approaches.
- Transparency in community decision-making fosters trust amongst members.
- The use of virtual worlds for learning is extremely attractive to students and incorporating additional Web 2.0 technologies such as wikis and blogs helps them to formalise their learning experience and reflect on community issues.
- Engaging students in the development of a learning community from its outset enables them to become stakeholders in the learning vision.

11. BREAKOUT

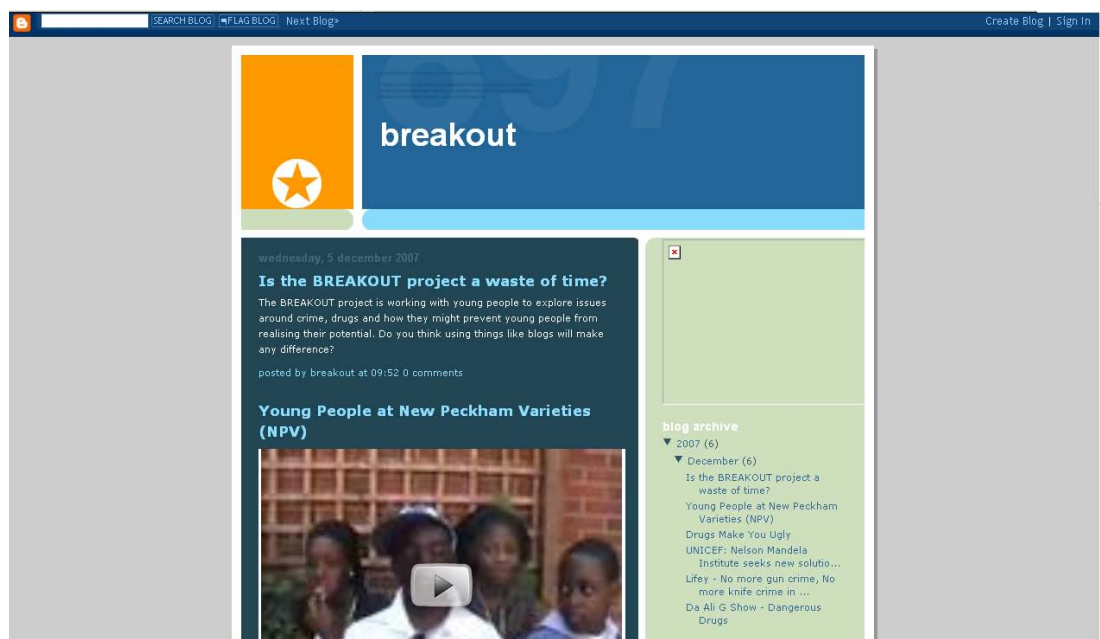


Fig. 11.1: The BREAKOUT blog

11.1 Data Collection

Data collection activity	Specification (type of data collected; numbers involved)	Profile of respondents/users (age group; gender; learner type; inclusion type)
On-line data capture	Utilisation data on visits to BREAKOUT web site. Uploaded and downloaded content.	Group 1: School students (age 14-15). Group 2: Tower Hamlets Young people (age 14-18; cultural mix – mainly Asian)
Key informant interviews	6 teachers	Headteacher. Head of Year. 4 class teachers
Focus Groups	2 focus groups. 1 Young Peoples Service Commissioners (15 members). 1 Drugs outreach workers (10 members)	Young People's Drugs Services; Youth Offending Team; Probation Service.
SAQ	2 SAQ's (Initial and summary) SAQ 1: 26 SAQs completed SAQ 2: 16 SAQs completed	14-15 year old school students. Mixed ability. 50-50 male/female ratio. Cultural background: white; Asian; African-Caribbean; Turkish.
Other interviews	None	None
Observation	4 workshops (half day) involving: i) Introduction ii) ICT tasks ii) discussions on crime, drugs and skills iv) interactive drama	14-15 year old school students. Mixed ability. 50-50 male/female ratio. Cultural background: white; Asian; African-Caribbean; Turkish.
Content analysis	Data developed and uploaded by school students on website (text; blogs; video clips)	14-15 year old school students. Mixed ability. 50-50 male/female ratio. Cultural background: white; Asian; African-Caribbean; Turkish.

11.2 Case profile

11.2.1 BREAKOUT in a nutshell

BREAKOUT is an innovative learning initiative aimed at addressing problems in offending and drug-related offending. It helps ‘at risk’ groups and offenders, particularly young offenders and offending drug users, to ‘break out’ of a vicious circle of bad experiences and low expectations of education, and hence limited life chance opportunities. It therefore extends conventional concepts of adult ‘Lifelong Learning’ to include ‘societal learning’ and ‘social responsibility’. The main aim of the project is therefore to develop an interactive learning environment, which also helps offenders, ex-offenders and those ‘at risk’ to explore the implications of ‘life decisions’ that will impact on their ‘offending career’.

The overall project, funded under the EC ‘Grundtvig Programme’, developed and tested learning approaches in offending prevention, in re-skilling of serving prisoners, and in rehabilitation of ex-prisoners and drug users. This was carried out in different pilot sites and scenarios, in different countries and with different target groups. This case study focuses on only one of these sites – in London, UK. This was the only site in the BREAKOUT project that developed Web 2.0 applications to support learning. The London site was itself split into three sub-sites, each of which had different scenarios, objectives, target groups and applications. These were as follows:

Scenario 1: drugs and crime prevention with students in a North London school;

Scenario 2: drugs and crime prevention with young people from ethnic minority groups in different communities in East London;

Scenario 3: supporting collaborative working with drugs service commissioners and outreach workers in an East London local authority (the one serving the target groups in Scenario 2).

Within the third scenario a ‘Commissioning Group’ was set up as a group of professionals responsible for commissioning drugs services who met regularly to evaluate service delivery and make recommendations to improve it. The BREAKOUT project developed an on-line ‘Commissioners Toolkit’ to help them work together more effectively and to help them improve services. This was supported by web 2.0 tools, including: content-co-production and editing tools and an on-line Forum, to further develop, disseminate and utilise the Toolkit.

The ‘Outreach Workers Forum’ was a similar organisation composed of drugs workers who carried out ‘outreach work’ in the local authority communities (i.e. working directly with residents, young people and other stakeholders ‘on the ground’). The BREAKOUT project developed a web-based platform, including: content-co-production and editing tools and an on-line Forum to help them work together more effectively and to help them improve services. The IPTS case study explored the effectiveness and outcomes of these three BREAKOUT initiatives.

The main platform for the services was an Interactive Content Repository containing resources (text, video clips, ‘true stories’, discussions) that provided a basis for developing and delivering awareness-raising and educational programmes, in particular in connection with scenario 1. This was supported by interactive drama workshops that enabled stu-

dents to develop and act out themes about crime and drugs that were raised during the programme. A key focus of the programme aimed to encourage students to explore and develop skills around 'empathy'. A novel way of doing this was to use a 'lifeswapping' model that enabled students to communicate with inmates on 'Death Row' in San Quentin prison, California, to collaboratively produce content on 'choices' affecting young people in relation to drugs, gun and knife crime.⁸³ The choices identified were then used to shape the drama workshops.

11.2.2 How and why was it started?

The project was funded under the EC 'Grundtvig' Programme. It builds on work carried out under a previous Framework 6 project called 'HERO' (Health and Educational Support for the Rehabilitation of Offenders), supported under the Information Society Technologies (IST) programme. HERO in particular developed tools involving interactive games to model offending support, rehabilitation and offending prevention scenarios that provided the basis for the 'lifeswapping' pedagogic model used in BREAKOUT, and the starting point for the use of Web 2.0 tools.

BREAKOUT was launched to address particularly problems and issues around low levels of numeracy and literacy; low levels of learning motivation; previously bad experiences of education and negative attitudes to learning; labelling of ex-offenders; language and cultural issues (for example in terms of the substantial numbers of migrants and asylum seekers in the prison population) as well as the lack of collaboration and knowledge-sharing between professionals working in the prison and rehabilitation systems.

The key objectives were: i) to develop a transferable learning and rehabilitation model, standards and tools; ii) to test them in indicative learning scenarios; iii) to build an 'evolving' European content resource for education professionals and support organisations, and foster inter-professional collaboration through the use of the resource; iv) to develop an evidence base on 'what works, for whom and under what conditions'; v) to contribute to a common pedagogic model and standards for European prison education; vi) to disseminate the results to a wide constituency of stakeholders.

11.2.3 In what ways has BREAKOUT changed?

The project changed in two main ways – firstly with regard to the technological platform and objectives planned and, secondly, with regard to one of its key objectives of promoting trans-national networking and knowledge sharing between professionals. The original plans for the project included a significant focus on using interactive games to simulate choices for offenders and the potential consequences associated with these choices (for example choosing or not choosing to pursue an educational course whilst in prison, choosing to carry a knife or not to carry a knife), to provide learning on occupational and career choices, and to develop ICT skills.

⁸³ Young people under the supervision of the Hackney (London) Youth Offending Team were involved in writing letters to Death Row inmates about how the inmates came to be in their situation. These letters formed the basis of an exploration of how crime and drugs affect life choices, and the capacity to make the most of people's talents.

The development and implementation costs of working with interactive games engines became prohibitive as the project developed, and the subsequent strategy entailed a shift from custom-made games to the use of social bookmarking – for example providing links to existing game-based and simulation programmes using ‘Flash’ technology. In this sense, the growing availability of Web 2.0 tools – particularly social bookmarking – enabled more cost-effective solutions to be used.

The second objective BREAKOUT had of fostering international co-operation between different professional groups across different sectors in the criminal justice, prison and drugs service system, was only achieved at a low level, mainly through co-operative actions between researchers. Professional groups themselves – for example the prison officers, counsellors, legal services, education providers – were not motivated enough to use the collaborative knowledge functions of the BREAKOUT platform and tools.

11.2.4 How is BREAKOUT funded?

The project was part-funded (70%) through the EC ‘Grundtvig’ programme. The remainder of the funding was provided through resources committed by the partners, and through ‘in-kind’ resources provided by institutions hosting the pilot experiments. These included prisons; NGOs; local government agencies.

11.2.5 Who is involved?

The main user groups targeted were:

- Offenders, comprising two sub-groups, “first offenders” aged between 18 and 25 years old, typically awaiting sentence or on remand, and prisoners due for release;
- Service and information providers working for external organisations (comprising Public Administrations and NGOs, providing specialised staff such as trainers, teachers, guidance experts, labour market advisers);
- Prison staff (comprising prison administration staff; educators, medical staff such as doctors, nurses, psychologists, physiotherapists, social services staff, and re-settlement support staff like probation officers);
- Young people ‘at risk’ of offending.

The user groups collaborated in 9 pilot sites in London, Athens, Erlangen, Girona and Tartu representing different Learning scenarios. The Table below shows the locations, user groups and scenarios covered.

Pilot site and users	BREAKOUT services
KETHEA, Athens	Counselling Centre Support; Re-entry Centre support; Family therapy; Support for special target groups (immigrants, refugees; Prevention; Legal Services
	Professional Training; Job Club
Lea Valley High School, London,	Teachers’ Pack; Life skills’ workshops; Skills development/Entrepreneurship workshops and tools; Crime workshops; Drugs workshops; Drugs and crime information; ‘True stories’ and video library; Skills assessment tool
Tower Hamlets DAT, London	Commissioners Toolkit; Outreach workers Toolkit; Knowledge exchange
Tower Hamlets	Drugs and crime information; Drug behaviours survey; ‘True stories’ and video

Youth Services, London	library; Skills development tools and workshops
National School of Public Health Athens	National survey of prison staff; Information services regarding job issues (i.e. how to deal with inmates) and raise awareness regarding staff development (i.e. <u>information exchange with other staff Unions in Europe</u>)
SOTHA correctional unit Erlangen	Skills assessment tool supporting professional development
SOTHA correctional unit Erlangen	BREAKOUT courses 'COMPT' 'COMputer applications and Telecommunication') and 'TOP' (Telematics, Orientation and Personal competences')
Montilivi therapeutic institution. Girona	Creation of pedagogical tools for job research IT course with 60 young people OSCOVE Vocational Courses adapted to virtual format
Tartu Prison, Murru Prison	Introductory course on use of information and communication technology in society Advanced course on use of information and communication technology in society

Fig. 11.2: Participants in BREAKOUT

A total of 1329 users were involved in the project. The majority of these – 65% - were professional staff working in the prison and offender and drug rehabilitation domains. Around 5% of users were young people, involved in BREAKOUT offending prevention activities; around 10% were inmates serving sentences or in therapeutic institutions, and 20% were clients of services providing support and rehabilitation services. It should be noted that for the purposes of this case study we refer below only to those users who were involved in scenarios where Learning 2.0 approaches and tools were used, i.e. the three London pilot sites. These involved 110 young people (from schools and community groups) and 81 professional staff (teachers, probation services, drugs services, youth offending teams).

11.2.6 What Learning 2.0 tools and approaches are used?

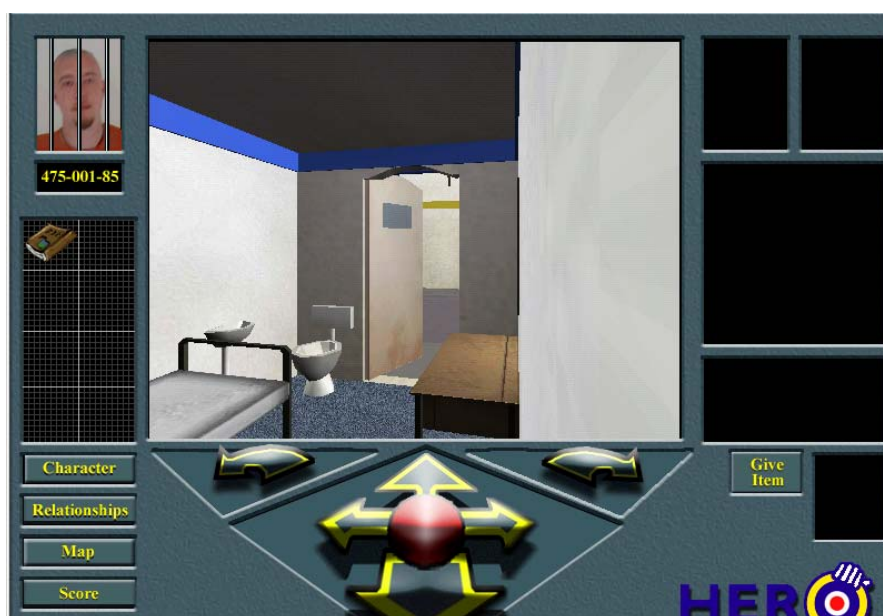


Fig. 11.3: The Breakout interactive game

The platform and tools used in the London pilot sites included the following:

- An interactive content repository and management, search and navigation tools (ICR), incorporating a video library, a decision support tool based on an interactive game, a skills assessment tool, content modules on knife and gun crime, information and support on substance misuse (particularly cannabis, alcohol and tobacco), a teachers' pack, a commissioners' toolkit for commissioning drugs services, and an outreach workers' toolkit.

Welcome to InfoSpace

This section provides young people involved with information on crime, drugs and learning.



Fig. 11.4: Infospace

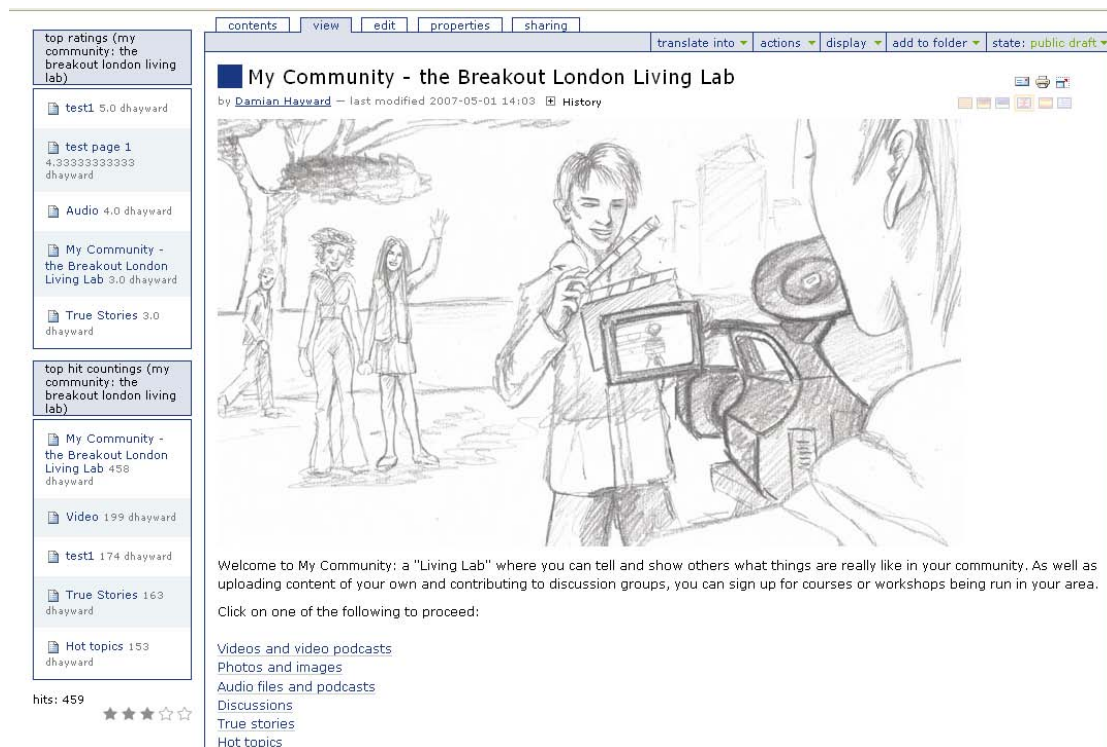


Fig. 11.5: 'My Community' space

- A Web 2.0 platform called 'Infospace' for young people. This included: an Interactive Discussion Forum with moderated themes on drugs, gun and knife crime, skills and making the best of talent, an on-line 'blog', social bookmarking and tags to link users to relevant interactive resources (including 'Riser' – an interactive site dealing with crime – and 'Talk to Frank' – an interactive site dealing with drugs

issues), media-sharing to YouTube (allowing access to video items on crime and drugs issues), a dedicated space on the website called ‘My community’ which aimed to channel material gathered by young people using an innovative ethnographic data collection including blogging, podcasting, flickr and other new ‘knowledge sharing’ tools. The site also provides opportunities for young people to improve their skills and gain qualifications in research and evaluation methods; video production and music and to showcase their work.

- A Web 2.0 platform for two groups of professionals – commissioners of drugs services and ‘outreach workers’ working in the community with young people. This was centred on an Interactive Forum enabling professionals to exchange good practices, provide updates on new legislation and professional development, co-author content, and evaluate and rate resources in the repository.

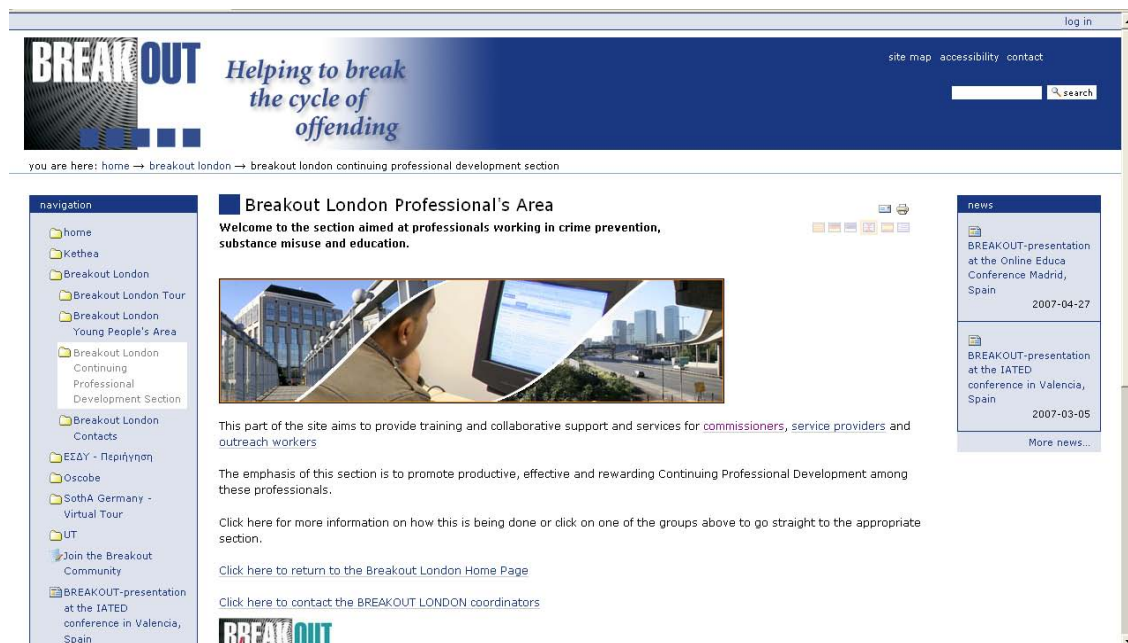


Fig. 11.6: Professionals' Forum

11.2.7 How does BREAKOUT promote social inclusion?

At its broadest level, the overall BREAKOUT project aims to support the re-integration of offenders and ex-offenders into society. This objective targets inmates who are serving sentences – in Sotha (Erlangen) in Tartu prison (Estonia) and in Montilivi young offenders institution (Girona). It does this by carrying out a learning and skills assessment audit, identifying learning and skills development needs, designing a learning plan for individual users, providing resources from the Interactive Content Repository (ICR) to enable users to collaborate with professional staff to improve their learning and skills. This objective was addressed mainly by using conventional technologies, not least because of the security constraints imposed in correctional institutions which inhibit the use of interactive tools and social networking.

However, the e-inclusion model approach adopted by BREAKOUT involved a ‘holistic’ methodology that also considered offending and drug use in terms of a ‘life cycle’ and placed emphasis on working with interactions between different stakeholders – including intermediaries like professionals, as well as young people ‘at risk’ of offending. This is where Web 2.0 tools and approaches were deployed in the three UK sites (in London) involved in the project – and these pilots were the subject of the case study covered in this report. A key feature of this approach is its incorporation of a ‘sensemaking’ methodology, a blended e-learning model, and a social networking model. Sensemaking as defined by Weick (Weick, 1995)⁸⁴ is an approach to thinking about and implementing communication practice and the design of communication-based systems and activities within communities of practice. The social networking technologies used in BREAKOUT were intended to promote sensemaking in two main ways. Firstly, by getting offenders, drug users and those at risk of offending and drug use to ‘step into the shoes’ of key ‘significant others’ – victims, family, peers and friends – and to develop empathetic skills to enable them to identify choices and work out their consequences. In turn, professionals were encouraged to step into the shoes of offenders in order to experience their needs.

In the BREAKOUT case, the sensemaking model centres on a ‘lifeswapping’ approach that aims to deliver a set of ‘points of view’ about crime and drugs. It incorporates the use of ‘true life’ narratives – video and audio – supported by other learning content, including text, social bookmarking and media-sharing links to relevant websites, chat rooms and blogs.

The second area where Web 2.0 tools and approaches were extensively used was to promote sense-making between professionals – commissioners of services and outreach workers – both in relation to their understanding better the needs of clients and in co-creating and sharing good practice. The intention was therefore to make their role more effective and hence contribute to more effective offending prevention and rehabilitation. The development of the inclusion approach drew extensively on existing state of the art in theory, research and practice in collaborative learning, group learning, communities of practice and ‘action learning (Mase, Sumi & Nishimoto, 1997). Collaborative learning was seen as a learning technique but at the same time a personal philosophy of social interaction. It encapsulates a way of dealing with people based on trust, respect and individual group members’ competences. The underlying assumption of collaborative learning is consensus building through co-operation by group members (Coomey & Stephenson, 2001), supported by the co-authoring.

11.3 BREAKOUT: Outcomes and impacts

11.3.1 What was the extent and pattern of user involvement in BREAKOUT?

The project as a whole involved 1,329 users. Utilisation rates of the BREAKOUT platform as a whole were lower than expected, particularly in the Erlangen, Athens prison, Oscobe/Montilivi and Tartu prison sites.⁸⁵ Over a twelve month period there were 8,974 visits to the site, 51838 page requests and 123,834 files sent back to the user. The rela-

⁸⁴ Weick K (1995) *Sensemaking in Organisations*, London, Sage.

⁸⁵ Utilisation data derived from BREAKOUT project.

tively low difference between the volume of ‘hits’ and volume of ‘files’ suggests that a large proportion of users were repeat visitors.

The BREAKOUT pilots in the three London sites – the main focus of the work applying Learning 2.0 tools and methods – involved 44 Year 10 school students (14-15 year olds) and 6 Teachers. The class reflected a mix of low and high ability students, a representative gender mix and a cultural profile that matched the diversity of the school’s catchment population – including students from ‘White British’, Asian, African, Caribbean and Turkish backgrounds.

The work with young people ‘at risk’ of offending involved 25 young people from mainly Asian backgrounds, and 75 professionals from commissioning services and outreach workers.

The utilisation patterns of the London sites were significantly higher than those in other sites – suggesting that the use of Web 2.0 tools and methods had a positive effect on user participation (although it should be noted that London involved 3 sites). The item in the bar chart labelled ‘North London’ in Fig 11.6 refers to the 110 young people and 81 professional staff covered by the IPTS case study.

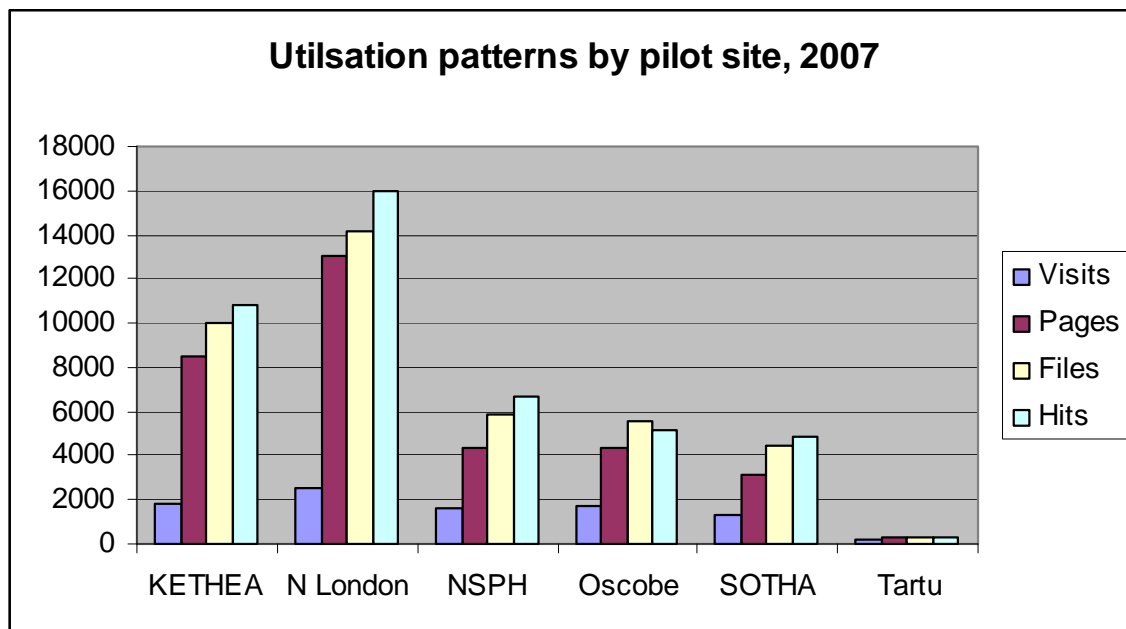


Fig. 11.6: Utilisation patterns by pilot site, 2007

11.3.2 In what main ways did participating in BREAKOUT benefit users?

For the work with student groups, the pedagogic approach used in the BREAKOUT Young People’s pilot sites involved a ‘blended e-learning’ model that combined the tools and services provided in the Content Repository with ‘action learning workshops’. The Programme addressed offending, drugs and skills issues with applying ICT skills to learn more about the issues.

In the work with schools, content was delivered using a ‘Teachers Pack’ created for the BREAKOUT Programme. A key aim of the pack was to deliver a pedagogic ‘message’

aimed at getting young people to think about how they can make the best use of their skills and talents – including ‘hidden’ talents they are not aware of. A supplementary aim was to get young people to think about how issues around drugs and crime can hold them back and prevent them realising their full potential. The Programme was structured around four modules. The first, introductory module, aimed to get students to think about the issues by focusing on three themes: choices, empathy and making the most of yourself and used a range of techniques, including the ‘lifswapping approach’ outlined above, to support the key messages (for example a ‘Memory Game’ and letters from Death Row, St Quentin Prison).⁸⁶

The results suggest that this blended e-learning model using Learning 2.0 tools had positive and tangible outcomes in raising awareness about the key issues involved in crime – particularly knife and gun crime – and drugs, and how these issues can hold young people back from realising their talents and making the most of life opportunities. When asked how much the programme contributed to helping them find out about drugs, 42% of the 44 students from the North London school participating in this study (under scenario 1) said ‘very much’ or ‘a lot’ compared with 19% who said ‘not much’ or ‘not at all’. The scores for the crime module were 49% and 18%, and for the skills module 31% and 26% as the Figure below shows. The relatively lesser impact associated with the ‘skills and talents’ module appears to reflect the difficulties a number of students had with linking drugs and crime with skills and opportunities. Whereas most students were able to easily relate to the issues around drugs and crime, and could identify with the scenarios they were presented with, they found it hard to make a bridge between how drugs and crime could affect life chances, and to make future projections about things like careers.⁸⁷

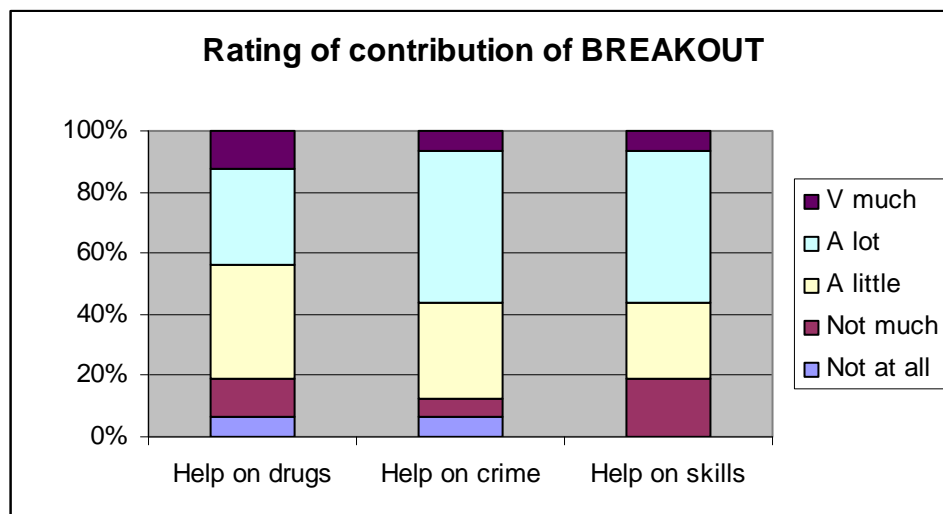


Fig. 11.7: Rating of the contribution of BREAKOUT

In feedback focus groups, participating students overwhelmingly responded to their experience of BREAKOUT in positive terms, using phrases like *“It was really fun”*,

⁸⁶ The Memory Game involved showing students a slide with the photographs of 20 well-known people. They were then asked to name as many of the 20 as they could remember. The people were selected to represent some of the issues later covered on crime, drugs and skills.

⁸⁷ Data derived from SAQ survey.

“Taught me about life” and *“Made me realise how people get killed on the streets”*. A particular bonus for many students was that the BREAKOUT programme provided a welcome contrast with the routine of the conventional curriculum. The majority view was that the ‘blended e-learning’ model – particularly its use of Learning 2.0 mixed with drama workshops – was both interesting and instructive. Feedback from participating teachers reinforced these findings. The consensus of opinion was that it enabled students to learn about issues they would otherwise have little information about. They agreed it provided an effective way of engaging even ‘hard to reach’ and ‘disruptive’ students in learning. From the professional angle, the staff considered BREAKOUT to have been beneficial not only for the students but also provided a number of positive outcomes for them. These included expanding their knowledge of drugs and crime, and providing an innovative model of how to link these issues to a developmental and skills-based teaching model, and providing an effective and user-friendly teaching resource – the BREAKOUT ‘Teachers Pack’, and increasing the motivation of students to learn.⁸⁸

In the work with young people’s community groups, i.e. participants in scenario 2 (young people black and ethnic minority communities in East London), and among service professionals (scenario 3: the Commissioners Group and Outreach Workers Forum), the results were much less positive. Very few young people used the Web 2.0 tools provided in the ‘My Community’ area of the website, and attendance at the interactive workshops supporting the initiative was poor – with only 8 young people attending the three workshops implemented. The things that young people think are good about the service focus on two key areas: availability of clear and useful information; and empathy and non-judgemental support. The things about BREAKOUT and drugs information and support services that young people think could be improved cover: easier access; more effective publicity; more engagement with the community – for example through youth clubs – more effective support to help young people stop using drugs.

In terms of the work with both the Commissioning Group and the outreach workers Forum, the BREAKOUT initiative could reasonably be described as disappointing. Content development using the co-authoring tools and interactive Discussion Forum was minimal. Both the Commissioning Group and the outreach workers Forum failed to motivate their members to develop and upload content, and to use the site for the purposes intended.⁸⁹

11.3.3 What kinds of ICT skills and competences have been supported by BREAKOUT? Did these include ‘higher level’ ICT skills?

A key objective of BREAKOUT work with school students (scenario 1) was to improve digital literacy by embedding ICT use within interactive and collaborative activities, including drama workshops and video making. The deployment of Web 2.0 tools – including podcasting and blogs to ‘showcase’ young people’s talents – was also intended to promote ‘higher level’ ICT skills development – including working with video, creating interactive Discussion Groups, finding and using content, using YouTube to create content. However, this aspect of the programme was less successful. Although in general most students enjoy ICT classes and always look forward to working with computers, the

⁸⁸ Source: Focus groups conducted through case study.

⁸⁹ Source: Focus groups conducted through case study; utilisation data from BREAKOUT project.

e-skills element was by far the least favoured by the BREAKOUT participants compared to the other two main elements – the drama and video workshops.

One of the methods adopted to carry out the ‘e-skills audit’ used in the case study methodology required the participants to use certain ICT skills in ways relevant to the material they were working with, including: listen to a presentation on how to use the BREAKOUT website, look at some existing websites and answer some questions about the content on the sites, identify some relevant content; download the content in the form of a weblink to their own folder on the BREAKOUT Content Repository, carry out a ‘skills self-assessment’ using the BREAKOUT skills assessment tool. Overall, the proportion of students able to achieve the e-skills tasks set for them was surprisingly low. To some extent this reflects a ‘learning curve’. In workshop 2, none of the class were able to select and upload content on drugs to the BREAKOUT Content Repository. By the third workshop the proportion completing the ICT tasks had increased to just over half the class, and in the final ‘Skills and Talents’ workshop the proportion of students completing uploading of content was 43%. Perhaps more significantly, the results showed large variations in the class in e-skills capability and capacity. For example, in workshop 2, by the end of the 60 minute period allocated for the ICT tasks, around a quarter of the class had not got beyond the stage of logging into the BREAKOUT website.⁹⁰

11.3.4 Did BREAKOUT help users learn other skills (e.g. ‘soft’ skills)?

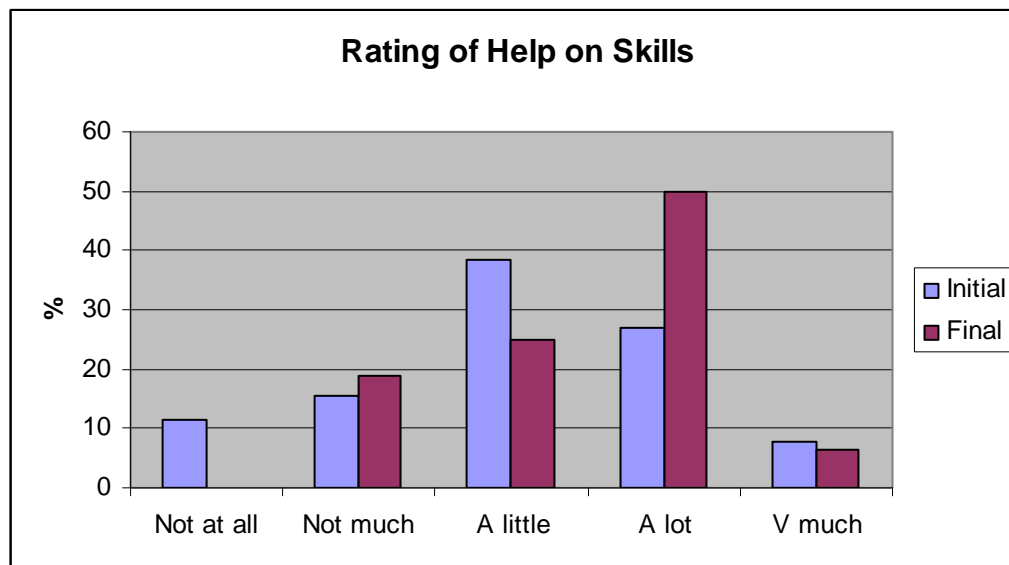


Fig. 11.8: Rating of help on skills

The underlying objectives of the pedagogic approach in the work with schools (scenario 1) were to support better team-working between students, get them to ‘think out of the box’, support active citizenship, self-expression and confidence – particularly by reinforcing the Learning 2.0 tools with interactive drama work. These objectives were specifically linked to the UK National Curriculum elements of fostering citizenship, human rights and social responsibility. The results of student self-administered questionnaires

⁹⁰ Source: Observation data carried out in case study.

and focus groups with students and teachers suggest that the main outcomes are the enhancement of transferable skills (information management, team-working, meta-cognitive skills, self-presentation), as well as the enhancement of life skills (identifying skills and talents, learning about difference, learning about social relationships, developing entrepreneurial skills). For example, one female student with a history of poor attendance, and exclusion from school, was one of the most active participants in the drama workshops. She produced a number of the ‘scripts’ around crime and drugs scenarios that fellow students then went on to act out.⁹¹

11.3.5 Did BREAKOUT equip users with skills that will increase their labour market opportunities?

The labour market dimension of the BREAKOUT skills development approach combined the following objectives: i) increasing generic ICT skills; ii) supporting development of ‘higher level’ ICT skills through the use of Web 2.0 tools; iii) developing transferable skills (including time management, team-working, information handling and use); iv) supporting students in developing ‘entrepreneurial’ skills (in line with the UK National Curriculum) for example by devoting a dedicated drama workshop to a ‘Dragons Den’ type entrepreneur role playing scenario; v) encouraging students to identify their ‘hidden’ talents and ways in which these could be developed. These objectives potentially contribute indirectly to increased labour market opportunities.

As the Figure above shows, the majority of students reported that the skills development element of the BREAKOUT programme had positively contributed to supporting their skills development.

11.3.6 What has been the contribution of BREAKOUT to broader social inclusion objectives?

Given the short-term timescale involved and the restricted scope of the BREAKOUT intervention in schools, it is impossible to give a measured judgement on the broader impact of the programme on social inclusion. However, the positive outcomes identified with regard to increasing young people’s awareness of offending and drugs issues, developing digital literacy, developing social responsibility potentially will have a beneficial effect in re-engaging ‘hard to reach’ young people.⁹²

11.3.7 In what ways did the use of Learning 2.0 contribute to institutional and organisational changes?

In one of the three BREAKOUT pilot sites where Web 2.0 tools and collaborative learning approaches based on social networking were introduced, changing organisational culture was a specific objective of the initiative. This was the work with professionals in the commissioning services and in outreach work (scenario 3). The Professional development services were targeted at two groups: Drugs Services Commissioners, Outreach Workers and frontline staff providing drugs services for young people in the London Borough of Tower Hamlets. BREAKOUT used a common ‘learning model’ to develop services for these groups, based on promoting skills development through the use of ‘toolkits’ and ‘ac-

⁹¹ Data derived from SAQ survey; staff interviews; observation of workshops.

⁹² Data derived from SAQ survey.

tion learning’. This reflects similar professional development needs across the groups. The main organisational change intended was to reduce the fragmentation and lack of cross-boundary and cross-disciplinary interaction that existed between different agencies and promote collaboration, co-production of knowledge and ‘sense-making’.

In effect, the introduction of a Web 2.0-supported collaborative learning environment had no impact on organisational culture and practices, for two main reasons, (1) the inherent ‘territorial’ nature of professional life, with little cross-fertilisation of ideas and knowledge between different services, and (2) time pressures, leading many professionals to see the opportunities presented by BREAKOUT as a nuisance rather than a potential benefit.

Although promoting organisational change was not a specific objective of the work with schools, the introduction of Learning 2.0 tools and approaches did have an impact on organisational processes. Some of this impact was ‘negative’ in that the programme disrupted existing timetabling and put extra pressure on teaching staff. However, the programme was viewed very favourably by participating staff and students, and the senior management team at the school made a commitment to exploring with school Governors how the programme could be integrated within the curriculum in the future.⁹³

11.3.8 Overall, to what extent were the intended learning and inclusion outputs, outcomes and impacts of the initiative realised?

Within scenario 1, BREAKOUT successfully delivered awareness-raising and offending and drugs prevention services to 44 students, involving 6 teachers in the programme, testing in parallel an innovative pedagogic model based on ‘blended e-learning’ and including creative workshops using video and drama.

The programme was highly rated by the overwhelming majority of participants. 82% of participants rating it interesting or very interesting compared with only 12% who found it ‘boring’ or ‘very boring’. Feedback from participating teachers reinforced these findings.

The main positive outcomes associated with the programme were, for students:

- increase in awareness of the causes and effects of offending and drug misuse behaviours; increased competence in ICT skills (specifically content creation and content management);
- enhancement of transferable skills (information management; team-working; meta-cognitive skills; self-presentation)’ enhancement of life skills (identifying skills and talents; learning about difference;
- learning about social relationships; developing entrepreneurial skills).

For professional staff:

- expanding their knowledge of drugs and crime, and providing an innovative model of how to link these issues to a developmental and skills-based teaching model;
- providing an effective and user-friendly teaching resource – the BREAKOUT ‘Teachers Pack’;

⁹³ Source: Staff interviews.

- increasing the motivation of students.

The less positive outcomes were:

- problems with usability of website and content management system;
- disruption to school timetable and resource capacity;
- issues around future sustainability of the programme.

The case study added further evidence to current debates about young people's digital literacy. There were significant variations in students' capacity and capability of performing ICT tasks. These are likely to be linked to factors such as social, family and cultural background, as well as cognitive factors such as 'learning style'.

The work with 'at risk' young people within community environments (scenario 2) did not achieve its objectives. The main reasons for this were:

- the complex nature of the Web 2.0 tools provided, and the fact that active engagement in social networking activities (for example using blogs and podcasts) required commitment;
- embedding the social networking model within a 'formal' space – the BREAKOUT web platform - this reflects the distrust by some young people of institutions and previous negative experiences of service provision. BREAKOUT suffered to some extent from the failure of previous initiatives in the area to effectively engage young people;
- the fragmented cultural and social environment within which different groups of young people interact.

The objective of developing a collaborative learning culture between different groups of professionals involved in commissioning and delivering drug-related services (scenario 3) was not realised. The main reasons for this were:

- the inherent 'territorial' nature of professional life, with little cross-fertilisation of ideas and knowledge between different services;
- time pressures, leading many professionals to see the opportunities presented by BREAKOUT as a nuisance rather than a potential benefit.

11.4 BREAKOUT: Success factors and barriers

11.4.1 What kinds of problems and obstacles have been experienced and how have these been addressed?

The main problems and obstacles experienced in the BREAKOUT London pilot sites can be summarised as follows:

- Technical problems
- Motivational and user engagement problems
- Digital literacy factors
- Cultural factors
- Organisational issues
- Financial issues

The key technical issues focus on two main factors: usability issues and system complexity issues. For example, the dedicated BREAKOUT website and content management system was considered to be relatively unfriendly in terms of its functionalities and user interface. The students thought that too many steps were required to carry out tasks; the security functions were too restrictive; navigation tools were too text-based and insufficiently interactive. Mainly for reasons of confidentiality and security, the BREAKOUT technology incorporated a 'hierarchical' structure that necessitated a relatively long sequence of keyboard actions to perform tasks such as content uploading. Students found this repetitive, complex and off-putting. However, it should be noted that the actual sequence of keyboard tasks does not differ significantly from that typically required to access familiar content like 'YouTube'. The lesson here is that students find applying ICT skills more difficult when they are used in unfamiliar contexts. In turn, the more sophisticated elements of the Web 2.0 implemented in the programme – particularly the podcasting and weblog functions – were seen to be too complex and too time-consuming for users to comfortably master.

These problems cannot be separated from motivational and engagement issues, digital literacy issues and cultural factors. The case study results showed large variations in the participating class in e-skills capability and capacity. As outlined above, in one of the e-skills workshops, by the end of the 60 minute period allocated for the ICT tasks to be completed, around a quarter of the class had not got beyond the stage of logging into the BREAKOUT website. One major problem was that the class had been given passwords containing both upper case and lower case letters. Even this apparently simple and straightforward functional attribute of the system caused severe problems, since many of the students did not distinguish between upper and lower case when logging in. The impression of a prevailing under-developed e-skills culture within the class was reinforced by data gathered on ICT experience. Whilst the majority of students in the class had access to a computer at home, the range of expertise and experience shown was very limited – for example none of the class had heard of weblogs. These results reinforce the conclusions of the research literature – for example the results of the 'PISA' studies on educational performance carried out by OECD – that learning outcomes are highly de-

pendent on a combination of a supportive and high quality teaching environment, a supportive family environment and peer reinforcement.

Other cultural barriers highlighted by the case study include the influence of territoriality on social interaction and collaboration. This is reflected in the work with 'at risk' groups to some extent by the enduring power of cultural fragmentation and socio-cultural 'silos' in young people's everyday lives, with low levels of cross-cultural interaction between the different groups and cultures in the community. This militates against engagement in a social networking environment.

Territorial boundaries were also identified as a key factor in the organisational barriers that were experienced in promoting Learning 2.0 system with professionals. The culture within professional groups is highly territorial. Constant 'turf wars' are going on, not only between the various sectors represented within the 'offending and drugs environment'-social services; probation services, police, youth services, drugs and alcohol services – but also within the sectors themselves, because the way most services are set up is hierarchical and encourages competition. The main organisational problems experienced in the school environment were associated with timetabling issues and pressures on teaching staff.

Two main financial constraints were identified. Firstly, the high cost of developing interactive games and, secondly, and more importantly, the sustainability of the programme, in particular finding funding beyond the lifetime of the EC grant that supported it.

Some of these barriers were too entrenched to address effectively within the timeframe of the programme. The organisational cultures of offending and drugs services are highly bureaucratised and strongly resistant to change. One of the strategies used to address this was to implement 'action learning sets' with representatives of the different services in order to encourage them to 'step into each others shoes' and view positions and perspectives from the role of others. Whilst initially this strategy was welcomed, and the Action Learning Set provided a mechanism for knowledge sharing, the forum lacked an adequate level of commitment and participation. To some extent too the organisational culture of the school exhibits similar problems of 'silos' and territoriality and hence resistance to change. The strategy adopted to address this centred on getting senior management buy in. This, together with the favourable perceptions of the programme expressed by participating teachers, enabled these barriers to be largely overcome.

The technical issues encountered were addressed firstly by a process of re-shaping the website design, secondly providing training for young people to use the tools and thirdly by promoting 'learning by doing' and 'peer mentoring' within the classroom. This had the effect, as outlined in 11.3.3 above, of improving the performance of the participating students in completing their 'e-skills' tasks, as the programme developed.

11.4.2 Has BREAKOUT created things that were unexpected, or things that have had negative outcomes?

Two examples of ‘displacement’ and ‘multiplier’ effects were identified in the case study. Firstly, in the work carried out in school, the programme had to be situated within the school timetable. This represented a significant disruption to routine and caused some additional burden of responsibilities for staff, as well as some ‘knock on effects’ for other subjects. This initially prompted lack of motivation by the staff concerned, which was neutralised as the staff got involved. However, the resultant success of the programme generated some resentment amongst non-participating staff that they were not involved in an interesting programme, and that they had to compensate for their colleagues’ absence. Secondly, the programme raised students’ interest and expectations and has created a demand for further similar programmes which, if not met in the future, may lead to demotivation.

11.4.3 What factors have contributed to the success of this initiative and what lessons can be learned?

The main factors contributing to the successful outcomes of the initiative are as follows:

- The pedagogic model, and its incorporation of a ‘sensemaking’ methodology; a blended e-learning model, and a social networking model, supported by:
- Embedding the school programme within the everyday lives of participating young people and reflecting their interests;
- Securing senior management buy-in for the schools programme.

The holistic approach – bridging issues around ‘crime’ and ‘drugs’ with the idea of personal development – and linking this to the notion that young people have ‘choices’ (as exemplified by the catastrophic choices made by inmates on Death Row) provided a powerful platform to encourage young people to collaboratively engage in actively promoting social responsibility and social entrepreneurship. Similarly, the use of media-sharing tools like YouTube enabled the participating young people to situate their work in areas relevant to their interests and lives.

The main lessons to be learned from the case study are as follows:

- Young people’s e-skills are highly differentiated and highly selective. Whilst most could very rapidly access and download video clips from ‘YouTube’, and one or two had the skills to unblock ‘blocked’ websites, students’ capacity to apply ICT skills to ‘curriculum-based’ tasks, for example information-seeking or applying information within a conceptual framework, was limited. Young people’s e-skills are highly contextualised, and need to be framed within the context of their everyday lives and practices. Applying social networking tools to ‘abstract’ concepts is likely to be difficult for them. As a result, learning and inclusion programmes using Learning 2.0 tools and methods need to be highly interactive and based on ‘constructivist’ pedagogic principles and methods.
- The capacity for young people to profitably benefit from Learning 2.0 varies considerably. This capacity is likely to be linked to factors such as social, family and cultural background, as well as cognitive factors such as ‘learning style’. For

example, in the BREAKOUT school programme, the ‘visual learners’ in the class were identified by teachers as those who were most engaged with the presentational element of the programme; the ‘auditory’ learners were those who did best in the ICT tasks, and the kinaesthetic learners were those who were most actively engaged in the drama workshops.

- The evidence suggests that initiatives used in offending and drug misuse prevention remain low on the list of support sources young people turn to for help. Most young people keep their problems to themselves, or go to parents or carers and friends. This has significant implications for using Learning 2.0 approaches and tools to support social inclusion in this field. The effectiveness of social networking applications – particularly social computing, interactive discussion groups, blogs and wikis – is heavily dependent on users actively participating in a collaborative and collective culture that is external to their normal patterns and vehicles of social interaction.
- This is linked in turn to the concept of ‘Public and private’ behaviours. Young people’s attitudes and behaviours to offending and drug use are reflected in ‘frontstage’, i.e. public ways, but also in ‘backstage’, i.e. ‘underground’ and private ways which frequently conflict with frontstage attitudes and behaviours. The case study underlined the need to recognise and address both public and private spaces, being aware of the extent to which ‘social gatekeepers’ control discourse around crime and drugs in young people’s communities, and respect the importance of a ‘self-help support culture’ in addressing offending and substance misuse problems. As yet, the evidence is that Learning 2.0 systems and tools – and the conceptual models around motivation, engagement and collaboration that underpin their use – do not fully recognise these complex issues and processes.
- The use of Learning 2.0 tools and approaches to support collaborative learning are still significantly constrained by organisational culture and organisational barriers, linked to professional rivalry, competition for resources, inter-disciplinary differences and disputes and fragmentation of knowledge. Learning 2.0 initiatives will not work unless supported by organisational change.

12. Key conclusions: The contribution of Learning 2.0 to inclusion

12.1 Introduction

This final section draws together and synthesises the results of the case-by-case presentations and analysis presented so far to provide overall conclusions about what the eight case studies can contribute to deepening the knowledge base on the ‘Learning 2.0 landscape’ in Europe. In keeping with the objectives of the study, and reflecting the key research questions addressed, as set out in sections 2.1 and 2.2, the conclusions are presented as follows.

Firstly, we look at how the cases reflect a ‘slice’ of the Learning 2.0 landscape, in terms of how, together, they present particular configurations and combinations of Web 2.0 tools, social networking approaches, learning objectives and social inclusion approaches (see 12.2). The second aspect of our conclusions focuses on innovation –on the kinds of innovative learning approaches and pedagogies aimed at promoting social inclusion that are facilitated and supported by particular Learning 2.0 initiatives (see 12.3). The next sub-section, 12.4, considers success factors and barriers, in an attempt to identify lessons to be learned. Section 12.5 summarises the study’s findings on the issue of skills and competences, while section 12.6 addresses the institutional impacts of the initiatives discussed. Finally, in 12.6, we conclude with an overview of the potential of Learning 2.0 for inclusion – its outcomes, what works, for whom under what conditions, and how what was learned from the case studies can be used to support future policy and practice in the field.

12.2 Supporting inclusion

As noted above in Section 3.1, the cases reflect a spectrum of target users, technical platforms and Web 2.0 configurations, learning and inclusion settings and scenarios and objectives. The key points emerging from our analysis of this slice of the Learning 2.0 landscape are as follows:

- A wide range of Web 2.0 tools are currently being used to support inclusion. All of the Web 2.0 tools commonly identified in the literature are represented, ranging from social networking tools, through wikis, blogs and podcasts to virtual environments (Second Life), media sharing (mainly YouTube) and syndication tools (RSS feeds). The two groups of tools most frequently used are social networking and on-line office tools, mainly interactive discussion forums. However, all the cases involve combinations of different Web 2.0 tools. The cases also reflect something of a polarisation of complexity and innovation. At one end of the scale, examples like Notschool and ALPEUNED represent relatively ‘low tech’ technical solutions, based primarily on discussion platforms. At the other end of the scale, examples like Schome and Mundo de Estrellas involve sophisticated technical platforms using immersive technologies and games in combination with tools like podcasts, blogs and social networking. As noted in the introduction to this report, what is innovative about the cases presented is not primarily their use of ‘technical artefacts’ but how these

technologies are used in innovative practices supporting collaboration and social networking.

- The learning scenarios supported by these tools in turn reflect a broad spectrum, and typically adopt multiple combinations of social networking activities – particularly in the case of the Assistive Technology Wiki and BREAKOUT. However, two learning themes are common across all cases: supporting the creation and sharing of knowledge and promoting collaboration and interaction.
- Similarly, the learning objectives addressed by the cases reflect a wide range, from embracing accessibility, promoting new forms of learning, increasing motivation for learning, supporting user collaboration to promoting social engagement. However, a common objective across all cases is to promote accessibility to learning.
- This focus on accessibility places learning at the heart of the inclusion strategies adopted by the cases analysed in the report, although all of the cases address issues around ‘social isolation’. The focus on supporting participation in learning in three of the cases and on addressing issues around low ICT use in three other cases highlight the extent to which social inclusion is currently being linked to digital literacy and engaging the ‘hard to reach’ in learning. Equally, three of the cases – Notschool, Schome and MOSEP – are specifically targeted at re-engaging people who have dropped out of the education system or who have difficulties in learning in conventional environments.
- What is also striking about the cases presented in the report is how innovative learning approaches using Web 2.0 are being promoted across different educational institutional settings. BREAKOUT and ALPEUNED operate in the formal education setting; Schome, Notschool, Mundo de Estrellas and MOSEP bring a virtual ‘non-formal’ institutional paradigm to what are essentially closed educational settings and the Assistive Technology Wiki and Conecta Joven involve a spectrum of mainly adult learners in a dispersed informal learning community of collaboration and practice.
- The diversity of the learning and inclusion scenarios represented by the cases means that a wide range of excluded groups are involved. In the case of Conecta Joven, a wide spectrum of groups are targeted – encompassing older people, young ‘hard to reach’, ethnic minorities, unemployed and people from deprived social backgrounds. However, two target groups stand out. These are, firstly, young people, who were involved in six of the eight cases analysed, and people with disabilities or medical conditions, targeted in four of the eight cases.

Drawing together the characteristics of the cases analysed, three types or clusters of Learning 2.0 for inclusion can be identified. These clusters are not primarily based on ‘structural’ characteristics. For example, Mundo de Estrellas could arguably be linked to Schome, Notschool, MOSEP and BREAKOUT since all involve young people. They reflect particular configurations of Web 2.0 tools linked to learning paradigms and learning and inclusion objectives and strategies.

Type 1 includes Schome, Notschool and BREAKOUT. All three examples focus on hard to reach, ‘at risk’ and disengaged young people of school age. They share a common focus – the re-engagement of young people in learning through the use of innovative

pedagogic approaches involving collaborative learning and new forms of learning. This is supported by a combination of Web 2.0 tools, to promote collaborative production of learning content.

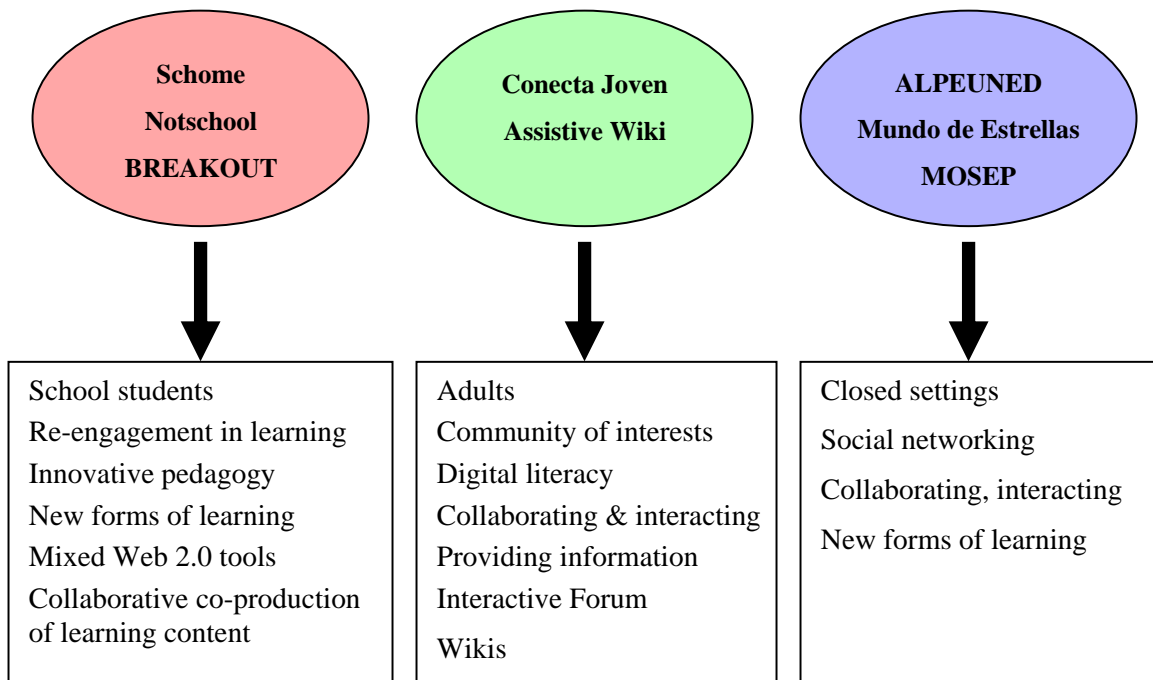


Fig. 12.1: Learning 2.0 types

Conecta Joven and the Assistive Technology Wiki represent Learning 2.0 innovations targeted at a diverse spectrum of adult learners and excluded groups. What binds them together is a shared ‘community of interests’. In the case of the Assistive Wiki, the focus is on sharing and evaluating knowledge about disability and tools and services to support disabled people. In the case of Conecta Joven, the focus is on helping people who are disadvantaged to gain the skills to enhance their life opportunities. In both cases, a key component of the inclusion strategy adopted is based on supporting the acquisition of ICT skills. Another common feature of the two cases is the emphasis placed on providing information through discussion forums and wikis.

Type 3 reflects a more complex configuration of Learning 2.0 environments. On the one hand, Mundo de Estrellas stands out with its distinctive setting – in hospitals – and its use of sophisticated Web 2.0 tools, although MOSEP reflects a similar adoption of a range of Web 2.0 tools including blogs, wikis and social networking. The common feature that connects the three cases centres on their adoption of a similar social networking approach, one that emphasises collaborating and interacting through using Web 2.0 tools. All three cases reflect the social isolation of their user groups – ALPEUNED through disability, Mundo de Estrellas through illness and MOSEP through educational failure. In all three cases, the common objective is to promote the wider engagement of users in social life by sharing experiences and problems in order to arrive at shared understandings and ‘sense making’ of the dynamics that lead to their exclusion – and hence the strategies required to promote inclusion.

12.3 Innovation

The key innovation question for the study was exploring how far innovative learning approaches and pedagogies are facilitated and supported by particular Learning 2.0 initiatives. As noted in Chapter 1, the study placed particular emphasis on exploring the innovative use of Learning 2.0 not simply in terms of technical functionalities, but in terms of how Web 2.0 reflects cultural practices. As outlined in Chapter 2 (Methodology) the study incorporated a method based on ‘cultural logic analysis’ which explored the ways in which the ‘vision’ and objectives of the cases reflected four kinds of innovation, i.e. *technological innovation* – the use of novel forms of ICT and the adoption of ICT in novel ways to support learning and inclusion, *pedagogic innovation* – the use of social networking models and methods to promote collaboration, co-production of knowledge and knowledge sharing, *organisational innovation* – for example, ways in which the ‘educational enterprise’ is being transformed to promote new ways of learning, *economic innovation* – promoting changes in how learning is implemented in cost-effective and sustainable ways. We also looked for examples of novel approaches to promoting social inclusion – the heart of the study.

The study identified examples of good practices in each of these five aspects of innovation.

12.3.1 Technological innovation

Example: Schome

The Schome Park teen Second Life Project uses virtual worlds to explore new educational possibilities. In some cases, students have experienced severe bullying. Through participating in a virtual world, the use of an avatar allows students to increase their self-esteem and their abilities to socialise and interact, without discomfort about physical appearance or awkwardness. Some students in the project have been identified as being on the Autism spectrum, and face-to-face communication is therefore very difficult for them. They find the text based chat in-world very liberating as they do not have to read people’s body language or facial expressions. Machinima is an excellent Web 2.0 tool used to engage learners.

Example: Notschool

Notschool can be thought of as being at the opposite end of the ‘technology’ spectrum to Schome. It uses relatively low tech Web 2.0 tools, essentially supporting an asynchronous on-line community, which runs on the FirstClass platform. However, this low-cost, low-tech platform is a secure and intuitive environment which provides the essential tools for learning online: email, conferencing, web page production, text chat, private notice boards and collaborative working tools, such as debating polls, which encourage participation. The on-line school community promotes active participation in learning communities, which enables young learners to form and develop their ideas and reengage in the education process, take ownership for their own learning and build the confidence and self esteem they need to progress onto college and employment.

12.3.2 Pedagogic innovation

Example: BREAKOUT

BREAKOUT extends conventional concepts of ‘Lifelong Learning’ to include ‘societal learning’ and ‘social responsibility’. The main aim of the project is to develop an interactive learning environment, which also helps offenders, ex-offenders and those ‘at risk’ to explore the implications of ‘life decisions’ that will impact on their ‘offending career’. Blending Web 2.0 – including interactive forums, blogs and video with media-sharing – with interactive drama workshops, BREAKOUT also puts students in touch with inmates on ‘Death Row’ in San Quentin prison, California, to help them understand how ‘choices’ affect their life-paths and enable them to use this experience in developing their own content to support awareness around crime and drug use as well as developing their e-skills.

Example: Schome

Schome Park shows that whilst Web 2.0 are not essential learning tools, when used innovatively they can be a powerful means of incorporating informal learning and allowing learning to take place when there is a lack of recognisable structure. In the absence of staff-led activity and prompting, students continued to use their blogs and contribute to the wiki to reflect and formalise their experiences of Schome Park, despite not learning anything that they felt was concrete.

Learner-led activities using a wide range of media encourage students to self-motivate, lead and engage others. They were able to use the Second Life environment to go on field trips – for example to Mayan temples – that otherwise would not be possible. In addition, the presence of ‘interesting’ experts with specialised knowledge in Second Life allowed students to meet people who they would not be able to in real life, and these experts proved to be valuable sources of information and advice.

12.3.3 Organisational innovation

Example: MOSEP

The main impact on organisational cultures is the changing role of the teacher. Teachers become ‘learning companions’ who facilitate independent learning and peer assessment during the e-portfolio process. Ownership is also a key issue which many teachers initially find difficult. The e-portfolio belongs to the learner and they can choose to share it, or parts of it, with whom they like. This may mean that some sections are shown only to peers, whilst others only to a family member. It may be that the teacher does not even see the final result if that is what the student wishes. The teacher’s role is one of support and guidance, and having gone through their own e-Portfolio process helps them in this, as they can recognise the value. As one teacher notes, *‘it is an excellent tool for developing a teacher’s competence profile’* as well.

Example: ALPEUNED

ALPEUNED targets a group of higher education students – people with disabilities – who face challenges in fully making the most of University life. Higher educational institutions are typically conservative, slow-moving and resistant to change. Though they usually implement equal opportunity legislation, institutionally, they have not moved forward in supporting disabled students in collectively developing a ‘community of interest’. Through the project, the students have been encouraged to work collaboratively by establishing different forums. The sense of community and shared problem solving has made

them cooperate and exchange advice on using the platform. Assigning functions and allowing self-selection has proved an effective way of inducing students to participate. The students have been willing to offer suggestions and guidance to fellow registered students who have had problems accessing the platform. This has created an institutional space within the University for disabled students.

Example: Mundo de Estrellas

Mundo de Estrellas shows how it is possible not only to continue providing formal education in a setting that is normally unsupportive of learning – the hospital – but also that learning can be enhanced through the use of Web 2.0 tools to support sharing of experiences. The implementation of the programme relies heavily on the public institutions involved and the individual hospitals. Organisationally, the operation of the programme is governed by the systems in place in the hospitals. There does not appear to be any difficulty in maintaining present levels of operation which depend on the presence of monitors to facilitate patients' sessions. The level of implementation of the new system and the amount it will be employed depends a lot on the professionals in the individual hospitals and to what degree they decide to engage in promoting the programme as a positive health initiative.

12.3.4 Economic innovation

Example: Conecta Joven

Conecta Joven deploys Web 2.0 to promote economic innovation at different levels of scale. At the micro level, the Discussion Forum, social networking tools, blogs, and Ning are used to support the generation of new content and learning courses and to provide the means to share knowledge and good practice amongst motivators and coordinators. This greatly reduces the costs of training for the organisation. In turn, the contribution to the value chain allows more effective support for the end users, so that ICT skills can be provided at low cost to key target groups. This in turn has an impact on increasing their chances of competing in the labour market, and therefore improves their individual economic position whilst contributing to the community's real and social capital. Finally, the strong partnerships developed with national and local authorities, commercial companies like Microsoft and the ONCE Foundation in Spain contributes to the sustainability of the initiative, thereby promoting what could be called a 'virtuous economic circle'

Example: Assistive Technology Wiki

As with Conecta Joven, the AT Wiki supports economic innovation on a number of levels. The AT Wiki uses the free Wetpaint platform, which does not require a high level of digital skill and is therefore more inclusive to users who may not be familiar with using wikis. It reduces the operating costs of Abilitynet and will in time improve the cost-effectiveness of its information provision since, at present, the Wiki consists mainly of pre-defined expert content on assistive technology topics such as 'Ageing', 'Physical Needs' and 'Vision', which contain pages that have been added and edited by AbilityNet employees. This forms the foundations for a knowledgeable yet adaptable wiki which can now be edited by a growing community of users and moderated by AbilityNet. Moreover, the ability to provide user reviews of assistive technologies will enable consumers to eventually find more cost-effective products.

12.3.5 Inclusion innovation

Example: Schome

The Schome virtual environment has endless possibilities for exploring, building, creating or destroying digital artefacts, which is a highly motivating aspect of their use in education. Learners are empowered and encouraged to use the space creatively. Whilst there is still plenty of scope for independent learning, virtual education naturally lends itself to collaborative learning. Confidence is built by anonymity and informality. Students are in an environment where they feel safe, are not pressured to achieve and therefore do not feel as worried about failing. Technical skills develop rapidly and there is much peer-support to help learners progress quickly. One student admitted that she had difficulties in public speaking and would not contribute much in small groups or whole class discussions at school. In Schome Park, staff could help her lead group discussions through Private Messaging her with support, encouragement and suggestions of how to move the discussion forward. This boosted her confidence and communication skills and eventually she was elected as head of the 'Schome Park government (the Schome Second Life environment. Her confidence in Schome Park contributed to increased confidence in real school situations, where she now finds public speaking much less daunting.

Example: Notschool

Notschool's constructivist, learner-led pedagogical approach aims to be as far removed from the traditional educational experience as possible. The content and curriculum are established by the student and there is no fear of failure or pressure to achieve. Through moving the focus away from accreditation-orientated learning, young people can rebuild confidence in their abilities and start to enjoy learning. Informal achievements are recognised and included as part of student progress. This focus on being 'not school' is further enhanced by the structural arrangements and semantics. Rather than the traditional student-teacher-headteacher structure, learners become 'researchers', who are guided and supported by 'mentors'. Mentors devise a learning plan for each researcher and communicate regularly with them, setting learning goals and targets. Through its informal approach where students have access to learning at any time and can begin to build responsibility for their own learning goals and progress, Notschool has successfully enabled 98% of young learners to re-engage in learning at some level and make observable progress.

12.3.6 Key conclusions for innovation

To summarise, the key conclusions emerging from the study on how Learning 2.0 is promoting innovation are as follows:

- There are few examples of 'radical' technological advances being used to support inclusion, for example signs of a movement to 'Web 3.0' and semantic nets. However, there are examples of the use of 'higher end' applications, involving virtual worlds and interactive games. Examples include the use of 'Second Life' in Schome, and avatars and interactive games in 'Mundo de Estrellas'
- Much of the innovation in Learning 2.0 applications for inclusion focuses on the integration of tools and approaches, mostly in blended e-learning environments, for

example BREAKOUT's use of combinations of Web 2.0 and drama workshops to promote 'lifeswapping'.

- There is some evidence that 'low tech' approaches in ingenious contexts produce innovation, for example Notschool's use of basic desk-tops and Firstclass to develop an innovative alternative school.
- There are signs of shift from individual use of social networking and social bookmarking to more collaborative and collectivised use, for example the use of YouTube video libraries in the Assisted Technology Wiki to disseminate knowledge about state of the art in support of people with disabilities.
- Many examples of pedagogic innovation could be identified— particularly new 'shared' roles in the educational enterprise based on the co-production of knowledge, for example MOSEP's 'open pedagogy' model and Shome's engagement of users in governance structures.
- Web 2.0 can expand learning horizons and engage learners in rich content environments, for example Shome's use of 'virtual field trips'.
- Overall, all eight cases can be seen as providing examples of best practices in approaches to promoting social inclusion through embedding excluded groups in learning experiences supported by Web 2.0 tools.

12.4 Barriers and success factors

12.4.1 Barriers

All the examples studied experienced challenges of different kinds and with varying degrees of severity. The main barriers to positive inclusion outcomes encompass five main elements: **technical issues, motivation and engagement issues, organisational issues, digital skills issues** and **finance and funding issues**.

Technological problems were common across the board. Some technical problems were identified with 'higher end' tools across most of the cases. In the case of Mundo de Estrellas, the present technology system is slow and outdated, leading to technical difficulties for the users particularly because many of the software applications require relatively modern equipment to run them. This example also illustrates challenges posed by obsolescence factors where high-tech solutions and content are involved. In the case of the Assistive Technology Wiki, although the platform and tools are relatively user-friendly, interoperability problems were encountered in linking up the open source system with proprietary systems.

Motivational and engagement problems are more fundamental to the successful implementation of Learning 2.0, since supporting collaborative and interactive engagement amongst as wide a constituency of users as possible is central to its ethos. These issues stem, firstly, from overcoming initial resistance to participation, given that excluded groups are typically 'hard to reach' and have previous negative experiences of learning and, in some cases, of technology. A second set of problems focuses on retaining a critical mass of users, and a third set of problems concerns addressing the power dynamics that militate against the active participation of certain kinds of user. For example, in the

case of the Assistive Technology Wiki, use of the system was dominated by professionals rather than the disabled people themselves, reflecting the tendency of already ICT-literate groups to colonise social networking environments.

This in turn is linked to **digital literacy** issues. In the BREAKOUT case, the lesson was that students find applying ICT skills more difficult when they are used in unfamiliar contexts. In turn, the more sophisticated elements of the Web 2.0 implemented in the programme – particularly the podcasting and weblog functions – were seen to be too complex and too time-consuming for students whose e-skills were mainly focused on accessing videos through YouTube.

Organisational problems mainly concern the changes to organisational culture that are associated with the introduction of Web 2.0 – particularly since it radically changes the teacher-student relationship from a ‘transmissive’ to a ‘co-production’ mode. Other institutional problems relate to changes in the organisational culture of the educational enterprise. For example, with BREAKOUT, the main organisational problems experienced in the school environment were associated with timetabling issues and pressures on teaching staff. Also, the divide that still exists between formal and informal learning settings might impede success. ‘Alternative’ scenarios like Notschool create challenges in terms of recognition of learning achievements and their accreditation

Finally, **finance and funding** problems were seen as issues across all cases. These range from acquiring initial start up funding through costs of developing and implementing a large scale infrastructure, as in the cases of Mundo de Estrellas and Conecta Joven, to developing and maintaining an effective sustainability plan that enables the initiative to continue.

Additional challenges arise from **existing power structures**, which are resistant to change and equality. For example the Assisted Technology Wiki under-represents disabled people and over-represents producers and suppliers. **Accessibility** is sometimes an issue in media-rich environments – for example, some of the Schome users found it difficult to access the technology and hardware used.

12.4.2 Success factors

Despite the obstacles outlined above, in almost all the cases these have been successfully overcome. Indeed, with the exception of BREAKOUT, which did not secure funding to continue beyond the life of the grant provided under the EU Grundtvig Programme, all the cases represent established and live ‘Learning 2.0 services’ that are flourishing. In most of these cases, their stability and sustainability can be attributed to backing from established organisations or strong partnerships. For example, much of the success of Conecta Joven is attributable to the strength of the partnership comprising Esplai Foundation and several key financial stakeholders. Similarly, Mundo de Estrellas is supported by the substantial financial and administrative backing of the Junta de Andalucía.

In addition to **strong partnerships and associated financial backing**, five sets of success factors that were common across the eight cases studied: **innovative integration and use of Web 2.0 tools, appropriate pedagogic models, new learning roles, commitment and motivation and organisational and professional buy-in.**

Innovative integration and packaging of Web 2.0 tools to create learning environments that are interesting, fun, supportive and which open up spaces to develop creativity and collaboration, typically for excluded groups who found it difficult to flourish in conventional learning environments. ‘High end’ technologies support inclusion through promoting empowerment, self-esteem, and confidence-building - for example, Schome’s success in engaging students with a history of poor performance in conventional schools. But equal success can be achieved using low tech strategies – for example Notschool, and the use of low cost available open source technologies like the Assistive Technology Wiki’s use of ‘wetpaint’ open source wiki. All the cases in some way developed and used combinations of Web 2.0 tools that suited the particular needs of their users. A particularly striking example is Schome’s virtual environment which has endless possibilities for exploring, building, creating and even destroying. This demonstrates a highly motivating aspect of the use of virtual environments in education. Learners are empowered and encouraged to use the space creatively.

Pedagogic models and approaches that are consistent with user needs and which support the technical strategies and tools adopted. The key to success lies in achieving a close fit between user needs, pedagogic models chosen and technical strategies adopted, for example the Notschool ‘constructivist’ model and the ALPEUNED ‘community of interest’. The Assistive Technology Wiki uses a ‘routes of desire’ approach, which allows users to access precisely the information that is necessary for their needs, and links members to a value chain of information and services. In the ALPEUNED case, the development of an online ‘community of interest’ supporting peer counselling and shared problem solving empowered the disabled students and enhanced their feeling of being part of a wider community.

Linked to the deployment of new pedagogic approaches has been the development and implementation of **new forms of collaborative learning roles** that have blurred the boundaries between ‘teacher’ and ‘learner’ and as a result have led to initiatives that have successfully engaged ‘hard to reach’, early leavers and excluded groups in productive learning experiences. For example, MOSEP developed a ‘learning companion’ role for teachers which enabled much greater collaboration with formerly difficult to teach students. Notschool created new roles and functions based on ‘researchers’, ‘mentors’ and ‘experts’. This introduced a novel ‘democratisation’ of relationships between teachers and taught which created space for students who were unable to function in a conventional educational environment.

Another key success factor is **commitment and motivation** at the ‘human interface’ level. For example, the success of Mundo de Estrellas is, in part, due to a dedicated staff of monitors and coordinators responsible for facilitating and encouraging engagement in project activities by patients on a regular basis, sometimes in situations where motivation can be difficult. In the case of Conecta Joven, volunteers play a crucial role in sustaining the cost-effectiveness of the initiative.

Finally, successful Learning 2.0 initiatives need **organisational and professional buy-in**. An example is the case of Mundo de Estrellas, where other health professionals, not directly involved in the initiative’s activities, recognise the benefits to be gained. In the BREAKOUT case, the recognition by senior management in the school that linking issues around offending and drugs to supporting students in understanding how to make the

best of their talents was seen as potentially of great value in contributing to curriculum development as a whole. Examples like Conecta Joven, Mundo de Estrellas and ALPE-UNED in turn reflect the importance of financial support and backing in promoting and sustaining initiatives.

12.5 Skills and competences

The study looked at skills from four perspectives: the contribution of Learning 2.0 to developing and supporting ‘basic’ digital literacy (for example computer skills), the contribution to developing and supporting ‘higher level’ e-skills (for example website design, video production, and co-authoring), their contribution to other kinds of skills (for example social interaction, and citizenship), and whether and in what ways the initiatives studied open up labour market opportunities for users.

Overall, the evidence provided by the case studies was uneven and ambiguous. What seems to be clear is that participation in these initiatives did lead to improvements in basic digital literacy across the board. However, the depth and quality of the skills acquired varies significantly in terms of factors like: the extent to which digital literacy is a key objective of the initiative, users’ existing level of digital literacy, the governance structures and ‘power dynamics’ within the initiative, and the availability and quality of mentors and tutors. In the case of Conecta Joven, digital literacy objectives lie at the heart of the programme’s commitment to ‘bootstrapping’ the skills of unemployed, ethnic minorities, older people and other excluded groups in order to improve their life chances, and the use of Web 2.0 tools was specifically geared to achieving this objective. In the case of the Assistive Technology Wiki, the adoption of a ‘routes if desire’ pedagogic approach meant that e-skills acquisition was a possible option, if desired, but the main objective of the Wiki was to provide a channel for users to obtain the information they needed as quickly as possible. Indeed, one of the conclusions of this case study was that the majority of users in this case were already computer-literate professionals.

In only a few of the cases is there clear evidence that Web 2.0 tools are supporting the acquisition of ‘higher level’ digital competences. These cases are the ones where sophisticated Web 2.0 tools – for example using immersive technologies and games – were deployed. A good example is Schome, where ‘Schomers’ developed extremely advanced digital skills through participating in the project. Whilst 79% of participants in the Pilot had never used Second Life before the project, most tried a range of Second Life activities and managed to achieve proficiency. Machinima projects appear to be extremely popular in Schome Park, where several members collaborate to produce a real-time virtual film which explores the use of camera angles and advanced Second Life techniques. In MOSEP, 76% ‘agreed’ or ‘strongly agreed’ that it helped them to do more complex digital tasks like social networking.

In many of the cases studied, the use of Learning 2.0 tools has positive outcomes with regard to developing non-ICT skills. In almost every case, participants shared common problems associated with poor ‘soft’ skills – both personal, e.g. self-esteem, and social, e.g. team-working and social interaction. There is strong evidence that Learning 2.0 technologies have the capacity to develop these skills and hence address some of the dynamics that create and sustain social exclusion. Examples include: Schome, where many students reported increased self-esteem; Notschool, where participants reported improve-

ments in their self-confidence; and MOSEP, where the e-portfolio can be used as a tool for formative self evaluation and reflection that is owned by the learner, and which in the process of creating it, can also improve the learner's confidence.

We found no real evidence of 'negative' effects on personal and social skills associated with participation in Learning 2.0 – for example increased social isolation. However, in two of the 'Web 2.0 rich' cases – BREAKOUT and Schome – differentials in existing digital literacy amongst students meant that some students found it difficult to both access and subsequently maximise the opportunities provided by the technologies, and there are some indications – which would need to be further explored and tested – that this could have an effect of increasing further existing perceptions of distance from learning, and on self perceptions of competences and adequacy.

We have little evidence that Learning 2.0 makes a significant contribution to supporting social inclusion at the wider level – for example through promoting individual active citizenship and through contributing to building social capital within communities. It should be pointed out, however, that the focus of this study was on 'closed' educational settings (the use of Web 2.0 in community environments is the subject of a separate IPTS study). It should also be noted that the definition of 'community' – and indeed definitions of 'wider social benefits' – need to be re-conceptualised in the context of the 'fluidity' of Web 2.0 environments, and the opportunities they offer for promoting 'flexible and multiple identities'. On the one hand, it is clear that initiatives like Conecta Joven are contributing to developing social capital, community cohesion, lifelong learning, intergenerational learning – and promoting cooperation amongst local organisations and diverse members of the community will undoubtedly have positive benefits for the individuals and their communities. On the other hand, initiatives like Assistive Technology Wiki, which aim to promote a range of inclusion objectives (increasing digital literacy, reducing social isolation, developing networks), are likely to have indirectly positive effects on building social capital since there is some evidence that they have increased life opportunities for users. Similarly, on the basis of self-reported ratings, participants in the BREAKOUT project said it had increased their awareness of the problems associated with crime and drugs, and made them think about how to make the most of their own talents. This finding provides at least a basis for drawing some positive inferences about the potential positive future impacts for the communities in which the students involved in BREAKOUT live. Within the organisational setting there is evidence that Learning 2.0 also supports e-skills outcomes for intermediaries and supports development of organisational capacity by broadening the skills and knowledge base. For example, MOSEP contributed to the professional development of the participating teachers.

However, it should be noted that direct evidence of the contribution of Learning 2.0 to opening up labour market opportunities for participants is very limited. As observed above, the Assistive Technology Wiki provided some examples of users improving their labour market skills, and, according to Conecta Joven, the programme has had an impact on improving employment rates in the communities it serves. Whilst our study did not find direct evidence to support this claim, there was some evidence from the young people acting as mentors and trainers in the programme that it had increased their job opportunities.

To summarise:

- The evidence of how Learning 2.0 initiatives contribute to developing and supporting ‘basic’ digital literacy, ‘higher level’ e-skills, other kinds of skills (for example social interaction, citizenship), opening up labour market opportunities is patchy and inconclusive.
- Though in all cases there is evidence to suggest that Learning 2.0 initiatives do support the acquisition of basic ICT skills, the depth and quality of the skills learned varies significantly and depends on factors like whether digital literacy is a primary or secondary objective, users’ existing level of digital literacy, the governance structures and ‘power dynamics’ in the initiative, and the availability and quality of mentors and tutors.
- The case studies show a broad distinction between those supporting the acquisition of ‘basic’ e-skills and those supporting the acquisition of high level e-skills. Examples of basic e-skills include Notschool, ALPEUNED and Conecta Joven. Examples of higher e-skills include MOSEP, Mundo de Estrellas and Schome. The latter shows convincing evidence that engaging students in a rich immersive Web 2.0 environment has positive outcomes in terms of developing higher level e-skills.
- There is strong evidence Learning 2.0 tools are associated with positive outcomes in developing ‘soft skills’ – both personal, like self-confidence, and social, like team-working and time management. We found no conclusive evidence of negative impacts – for example increased social isolation – associated with the participation in Learning 2.0 environments, although there were some indications that existing ‘skills gaps’ amongst students in Web 2.0-rich environments could contribute to increasing skills gaps between students who are computer-literate and students who are not. This, in turn, could contribute to further feelings of exclusion from learning.
- There is less evidence that Learning 2.0 supports ‘active citizenship’, although some examples were identified, like Schome involving students in setting the governance rules and management of ‘Schome Park’. Mostly empowerment is supported within institutional boundaries rather than within the broader arena of ‘social capital’. For example, MOSEP supported the cultivation of ‘collective solidarity’ within its own ‘e-portfolio’ community environment, and ALPEUNED developed a ‘community of shared experience’ amongst disabled students.
- There is some evidence that the acquisition of e-skills contributes to supporting inclusion. Many cases reported improved self-esteem amongst users, for example in the cases of Notschool, ALPEUNED, AT Wiki and Mundo de Estrellas.
- Learning 2.0 also supports e-skills outcomes for intermediaries and supports the development of organisational capacity by broadening the skills and knowledge base. For example, MOSEP contributed to the professional development of the participating teachers.
- We found no real evidence of a ‘downstream’ contribution to labour market mobility associated with Learning 2.0 initiatives. For example, it is not clear how far the MOSEP e-portfolio affects job behaviours and job outcomes. In the case of the Assistive Technology Wiki, there were some individual examples of increased labour

market prospects for participants, and there is indirect and unverified evidence from Conect Joven that the programme is contributing to reducing unemployment in excluded communities. It should also be borne in mind that the case studies were not intended to assess long-term impacts.

12.6 Institutional changes

The focus of this aspect of the study was on exploring whether and in what ways Learning 2.0 is promoting changes in the way the educational enterprise is structured and how it operates. As outlined above, the eight cases represent a spectrum of institutional settings, involving formal, non-formal and informal learning. ALPEUNED operates within the formalised structure of a university, BREAKOUT was implemented in a secondary school, and Notschool, MOSEP, Schome and Mundo de Estrellas could also be seen as schools – though not in the conventional sense. In this regard, one could argue that Learning 2.0 is already driving forward radical changes in the way schools operate, since all these four cases constitute stable, but virtual, school environments. More significantly, they represent significant changes in the ways in which conventional education systems demarcate learning roles and endow them with particular responsibilities and power positions. In all cases, teacher-learner relationships have been replaced by more collaborative, and, it is argued in some cases, more democratised interactions between teachers and learners. For example, in Notschool, rather than the traditional student-teacher-head teacher structure, learners become ‘researchers’, who are guided and supported by ‘mentors’. Mentors devise a learning plan for each researcher and communicate regularly with them, setting learning goals and targets. In MOSEP, teachers become ‘learning companions’ who facilitate independent learning and peer assessment during the e-portfolio process.

Moreover, these emerging institutional spaces are changing traditional boundaries between school and other environments – particularly home and the family. Not only is Schome, as its name suggests, a kind of half-way house between school and home, but participants can also access Schome Park through the teen grid on Second Life, from either school or home. Activities take place at different times to allow students from different parts of the world to interact and collaborate. Schome also reflects radical changes in how the enterprise is governed. Although some traditional schools have had student representation in some form – for example, through staff-student consultation committees, Schome represents a radical form of constitutional co-governance between ‘staff’ and ‘students’. There is an ‘open pedagogy’ approach although staff and teachers on the island have to agree to ‘buy in’ to the ethos and conventions, encouraging equality experimentation in teaching practice, use of constructive criticism and making mistakes.

However, one interesting conclusion from the Schome case study is what happened when the ‘mix’ of students involved was changed. Different social cultures led to conflicts, in particular between the rules of Schome Park and the rules of a real-world classroom scenario, which was difficult for both adults and children to adapt to.

Another set of issues raised by the Schome case – and also Notschool – centres around how accreditation and ‘equivalence’ of learning outcomes are handled within the conventional educational enterprise. Both cases involve students who do not flourish in conventional educational environments, and their achievements within the Learning 2.0 setting

are to some extent shaped by the ‘open pedagogy’ approach implemented in each case. This does not sit easily with conventional standards of educational achievement.

The Schome case reflects a broader set of issues common to most of the cases analysed. The evidence suggests that any innovation when introduced into an established organisational culture will meet with resistance. So, for example, in the BREAKOUT case, problems with timetabling were encountered and these problems would have been more serious had BREAKOUT not been able to secure backing from senior management.

To summarise:

- There is some evidence that Learning 2.0 is beginning to realise examples of radical new educational structures and environments, as exemplified by Notschool, Schome and MOSEP. These do not necessarily reflect the added contribution media-rich Web 2.0 environments can provide, since Notschool is essentially low-tech, but more the pedagogic rather than the technical nature of social networking. This in turn reflects the adaptation and assimilation of new practices within existing organisational cultures. For example, ALPEUNED has changed how disability is approached within the Spanish Open University.
- There are a number of examples of good practices that can be transferred to more conventional educational settings. Examples include the Notschool constructivist mode for students who do not flourish in traditional learning environments, and Schome’s use of ‘virtual field trips’ to provide rich and creative learning environments for students that otherwise would not be possible.
- The study highlighted the emergence of new forms of ‘producer-consumer’ relationships based on co-production of knowledge and content that are beginning to change how the educational enterprise operates. Examples include Notschool’s use of ‘researchers’, and MOSEP’s use of ‘learning companions’
- A big institutional challenge for Learning 2.0 is how issues around accreditation and ‘equivalence’ of learning outcomes derived from new pedagogic environments – particularly those based on ‘open pedagogic’ methods - are handled within the conventional educational enterprise.
- Another challenge is overcoming institutional resistance when Learning 2.0 is introduced into stable conventional educational settings.

12.7 Outcomes and impacts

Participation and utilisation vary across cases. On the one hand, large scale programmes like Conecta Joven involved over 4,500 adult learners and 1,500 trainers and mentors in 160 institutions in 34 local regions. Mundo de Estrellas provided learning for over 11,000 young people in 32 hospitals in Andalucia. At the other end of the scale, less than 100 users are active users of the Assistive Technology Wiki (though it has not been established very long). Moreover, active participation rates vary significantly. Although ALPEUNED represents in many respects a ‘success’ story, only 10% of the 4,000 disabled students at the Spanish Open University were active participants in the initiative. In the BREAKOUT case, the utilisation of the website by professionals working in drugs and young people’s services was extremely low.

Participation and utilisation seems to be linked to factors like: the learning and inclusion objectives of the initiative, the scale of the initiative, the ‘richness’ of the Web 2.0 environment and the complexity of the tools, the quantity and quality of human support available, the appropriateness of the pedagogic approach implemented. For example well-funded projects aimed at supporting basic digital literacy like Conecta Joven appear to enjoy relatively high participation. Mundo de Estrellas, a media-rich learning environment that supports creative learning and is heavily supported by professional staff and parents, is highly popular. Schome in its early phase involved a small number of highly engaged gifted young people but in its later stages – where a much broader mix of ‘hard to teach’ students were involved – showed variable rates of participation and utilisation.

On the whole, however, the study shows strong evidence of positive outcomes, for both learning and inclusion, associated with the use of Learning 2.0. The most significant contribution of Web 2.0 to promoting inclusion appears to be within existing institutional spaces and environments – through increasing learners’ self-esteem and empowerment, through promoting active co-production of knowledge, and through inculcating team-working and community of practice identity and belonging.

We found no real evidence of impacts on inclusion at the broader level. The contribution of Learning 2.0 to labour market mobility is not established, and there is limited evidence on whether and in what ways Learning 2.0 is contributing to ‘active citizenship’ and to developing social capital. The study identified a number of examples – mainly in the school sector – of emerging new educational enterprises, with three main drivers: new media-rich learning settings, new ‘open pedagogy’ approaches, and new forms of collaborative learning based on provider-consumer relationships and roles. But the study found little evidence of wholesale changes in teaching and learning across all sectors of lifelong learning. It did, however, highlight examples of innovation that could be productively mainstreamed, particularly with regard to new pedagogic models and collaborative learning roles.

‘What works for whom under what circumstances’ is difficult to say with certainty, since the evidence derived from the case studies is fragmentary, uneven and sometimes ambiguous. However, from the evidence collected and analysed, the following findings are highlighted:

- One of the key findings is that ‘success’ is not necessarily linked to the ‘richness’ of the Web 2.0 technologies on offer. Although media-rich environments show positive learning gains for participants, and promote their active educational, social and psychological re-engagement, ‘low-tech’ environments show equally positive results (Examples: Notschool; ALPEUNED). The key factor for success appears to be how well the needs of users, the technological and pedagogic choices made and the availability of effective support roles like mentors and ‘learning companions’ fit together (Example: Schome).
- ‘Open pedagogy’ approaches involving collaborative, co-productive and more ‘equal’ roles between ‘teacher’ and ‘learner’ than hitherto implemented are both possible and made more effective by social networking technologies and social networking environments (Examples: Notschool; MOSEP).

- Key mediating factors in realising successful learning and inclusion outcomes within Learning 2.0 environments are: existing levels of basic digital literacy, the cultural and social ‘mix’ of participating learners, and the presence and quality of support available for other sources – for example family and peers (Examples: BREAKOUT; Schome). Existing power dynamics – for example those between computer-literate and non-literate – can not only reduce the positive impacts of Learning 2.0 for users but also increase social exclusion for the vulnerable (Example: Assistive Technology Wiki).
- Learning 2.0 environments involving novel forms of learning like ‘open pedagogy’ open up opportunities for the ‘hard to teach’ to engage in creative and self-paced learning. However, accrediting any achievements gained causes problems in a world of prevailing educational standards, and there is a need for more effort, to develop accreditation and standard procedures and protocols that can help bridge gaps between Learning 2.0 and the conventional education establishment (Example: Notschool).
- Strong partnerships, combined with necessary levels of sustainable funding, are crucial in supporting the success of Learning 2.0 initiatives (Example: Conecta Joven). There is a need for further research to gather the evidence on cost-effectiveness of Learning 2.0 in order to feed into both future business models and policy initiatives designed to promote its further development. This work also needs to consider how low cost solutions and open source technologies can contribute to developing Learning 2.0 (Examples: Notschool; Assistive Technology Wiki).
- Equally, organisational buy-in – particular from professionals and senior management – is crucial for success (Examples: BREAKOUT; Mundo de Estrellas).

12.8 Study Overview

We conclude this report with two summary tables that are intended to synthesise the results gained from the study. Table 10 provides the key conclusions of the study together with a supporting justification, drawn from the evidence collected in the study, for each conclusion. Table 11 provides a response to the overall key research questions posed by the study: “What examples of good practice can be identified and how can these be used to support future policy and practices in the field?” It summarises the lessons learned from the study, by drawing some patterns of association between particular Learning 2.0 profiles and what works.

Table 10: Conclusions on key research questions addressed and supporting evidence

Research Question	Main conclusions	Supporting Evidence
What kinds of Learning 2.0 applications are currently being developed and implemented to support lifelong learning and social inclusion?	<p>A wide range of Web 2.0 tools are currently being used to support inclusion.</p> <p>These include social networking tools, wikis, blogs and podcasts through to virtual environments (Second Life), media sharing (mainly YouTube) and syndication tools (RSS feeds).</p> <p>The two groups of tools most frequently used are social networking and on-line office tools, mainly interactive Discussion Forums. However, all of the cases involve combinations of different Web 2.0 tools.</p> <p>The cases reflect both relatively 'low tech' technical solutions, based primarily on discussion platforms, but also involve sophisticated technical platforms using immersive technologies and games in combination with tools like podcasts, blogs and social networking.</p>	<p>See Table 6.</p> <p>6 of the 8 cases involve combinations of 5 or more different Web 2.0 tools.</p> <p>All 8 cases use a social networking tool.</p> <p>6 out of 8 cases use an interactive Discussion Forum.</p> <p>Notschool and ALPEUNED are based primarily on discussion platforms.</p> <p>Schome and Mundo de Estrellas reflect complex and media-rich environments involving immersive technologies and games in combination with podcasts, blogs and social networking</p>
What are their characteristics, in terms of technical configurations, learning scenarios, pedagogic methods, institutional arrangements?	<p>Three types of Learning 2.0 for inclusion can be identified.</p> <p>Type 1: School students in re-engagement in learning using open pedagogy methods to support new forms of learning and collaborative co-production of learning content.</p> <p>Type 2: Adult users promoting a 'community of interests' through supporting digital literacy, collaborating and interacting and providing information mainly through Interactive Forum Wikis</p> <p>Type 3: Closed settings – e.g. hospitals, universities – involving social networking to support collaborating and interacting and promote new forms of learning.</p>	<p>See Figure 12.1.</p> <p>The cases reflect a wide spectrum of target users, technical platforms and Web 2.0 configurations, learning and inclusion settings and scenarios and objectives (Tables 3 to 8).</p>
What kinds of innovative learning approaches and pedagogies are facilitated and supported by particular Learning 2.0 initiatives?	<p>Much of the innovation in Learning 2.0 applications for inclusion focuses on the integration of technical, institutional and economic innovation mostly in blended e-learning environments.</p> <p>Two main types of pedagogic innovation could be identified: i) the use of open pedagogic methods ii) new 'shared' roles in the educational enterprise based on the co-production of knowledge, using an 'open pedagogy' model.</p>	<p>An example is Schome, which involves students with learning difficulties like autism. It uses 'Machinima' – a game-based tool within a 'Second Life' environment – within an 'open pedagogy' approach that allows students to co-create their learning strategies. The use of an avatar allow students to increase their self-esteem and their abilities to socialise and interact, without discomfort about physical appearance or awkwardness.</p> <p>All 8 cases support co-creation of content and knowledge sharing.</p> <p>All 8 cases use some form of open pedagogy to promote collaboration and interaction (Table 7)</p>
In what ways do Web 2.0 applications support social inclusion, in terms of motivation, accessibility, confidence, digital skills?	<p>Innovative integration and packaging of Web 2.0 tools are creating learning environments which open up spaces to develop creativity and collaboration and are being used to support excluded groups who find it difficult to flourish in conventional learning environments.</p> <p>'High end' technologies support inclusion through promoting empowerment, self-esteem, confidence-building.</p>	<p>In six out of the eight examples, addressing social isolation – for example isolation through ethnicity, exclusion as a result of economic situation – was the primary inclusion objective. Supporting people with disability was the main objective in three of the cases; four cases focused on supporting participation in learning and three cases addressed issues around low ICT use. (Table 4)</p>
What specific learning outcomes are associ-	<p>There is strong evidence of positive outcomes, for both learning and inclusion, associated with the use of Learning 2.0. However, 'success' is not necessarily linked to the 'richness' of the Web 2.0 tech-</p>	<p>Notschool has successfully enabled 98% of young learners to re-engage in learning at some level and make observable progress (data from Notschool own monitoring.</p>

<p>ated with the use of Learning 2.0 applications and initiatives?</p>	<p>nologies on offer. Although media-rich environments show positive learning gains for participants, and promote their active educational, social and psychological re-engagement, 'low-tech' environments show equally positive results.</p>	<p>ATW: 75% of respondents use the Wiki to 'share information about new technologies'; 62.5% of respondents use the Wiki to 'find out about the latest developments'; 50% of respondents use the Wiki for 'getting in touch with people' (SAQ data)</p> <p>Creating community of practice: Assistive Technology Wiki: <i>"It will improve through better promotion and wider awareness, thereby increasing in membership and growing in amount of information shared"</i> (SAQ data)</p> <p>ALPEUNED empowering the students to learn independently - 480 disabled students active users of the counselling service (Interview with co-ordinator)</p> <p>Digital literacy - Conecta Joven: 64% use new ICT skills to communicate through email; 69% use it to generate documents; 49% to communicate using instant messaging and 44% use it to look for a job (2008 evaluation done by CREA at Barcelona University)</p> <p>New forms of learning - virtual worlds are not pre-defined spaces and can achieve the physically impossible. This proved particularly useful for students' archeology sessions, where they were able to re-enact the sinking of the Titanic, build Roman roads and aqueducts and visit the Caves of Lascaux (User interviews)</p> <p>Collaborative working – Schome - All of the SAQ respondents agreed that participating in Schome Park helped them to feel part of a community.</p> <p>BREAKOUT – 'lifeswapping'. Project raised awareness about the key issues involved in crime, and how these issues can hold young people back from realising their talents and making the most of life opportunities. When asked how much the programme contributed to helping them find out about drugs, crime and skills, 42% 49% and 19% said 'very much' (SAQ data). Learning outcomes for professionals: expanding their knowledge of drugs and crime, and providing an innovative model of how to link these issues to a developmental and skills-based teaching model, providing an effective and user-friendly teaching resource, increasing the motivation of students to learn (Staff interviews)</p>
<p>What specific inclusion outcomes are associated with the use of Learning 2.0 applications and initiatives?</p>	<p>In many of the cases studied, the use of Learning 2.0 tools has positive outcomes with regard to developing non-ICT skills. In almost every case, participants shared common problems associated with poor 'soft' skills – both personal. like self-esteem – and social, like team-working and social interaction. There is strong evidence that Learning 2.0 technologies have the capacity to develop these skills and hence address some of the dynamics that create and sustain social exclusion.</p> <p>Key mediating factors in realising successful learning and inclusion outcomes within these Learning 2.0 environments are: existing levels of basic digital literacy, the cultural and social 'mix' of participating learners, the presence and quality of support available for other sources – for example family and peers. Existing power dynamics – for example those between computer-literate and non-literate – can</p>	<p>Notschool enables users to be empowered by their learning and encourages them to develop their confidence and self-esteem as well as build up technical skills and a set of qualifications</p> <p><i>'The participant is given the role of a "researcher" because they are actively participating in determining what works for generating and sustaining an online learning community'</i> (Notschool 2005 evaluation)</p> <p>ALPEUNED – encouraged disabled students to be more activist in their demands for recognition – 33% of web postings were protests against registration fees (Content analysis of on-line data).</p> <p>Mundo de Estrellas <i>'After using Mundo de Estrellas I felt really good because I forgot about the pain I had and enjoyed myself'</i> (SAQ data). Positive contributions to self-esteem, personal well-being, health, educational, recreation</p> <p>improvement of ICT skills and using tools for social networking and meet-</p>

	<p>not only reduce the positive impacts of Learning 2.0 for users but can increase social exclusion for the vulnerable.</p> <p>We found little evidence that Learning 2.0 makes a significant contribution to supporting social inclusion at the wider level – for example through promoting individual active citizenship and through contributing to building social capital within communities.</p>	<p>ing people online - 70% rated high contribution – SAQ data)</p> <p>Reducing isolation from social and economic life – <i>Conecta Joven</i>: The main users benefiting from the initiative consist of groups with little or no basic ICT skills including: adults, women with no career (typically aged 45 and above), older people and immigrant populations (2008 evaluation by CREA, University of Barcelona)</p>
<p>What institutional and organisational changes – for example on organisational cultures, on the educational enterprise – are associated with the use of Web 2.0 applications in lifelong learning and social inclusion?</p>	<p>There is some evidence that Learning 2.0 is beginning to realise examples of radical new educational structures and environments. This in turn reflects the adaptation and assimilation of new practices within existing organisational cultures</p> <p>'Open pedagogy' approaches involving collaborative, co-productive and more 'equal' roles between 'teacher' and 'learner' than hitherto implemented are made more effective by social networking technologies and social networking environments. The study thus highlighted the emergence of new forms of 'producer-consumer' relationships based on co-production of knowledge and content that are beginning to change how the educational enterprise operates</p> <p>Learning 2.0 also supports e-skills outcomes for intermediaries and supports development of organisational capacity by broadening the skills and knowledge base.</p>	<p>Creating a learning organisation: Assistive Technology Wiki: A change in communication behaviours of AbilityNet stakeholders - shift from 'static' e-mail to collaborative, using the Wiki and discussion forum to share information (Interview with manager)</p> <p>Mundo de Estrellas: Embedded learning in hospital organisational structure and obtained buy-in from professionals (Staff interviews)</p> <p>ALPEUNED: Management Board receives direct feedback from the "customers" to improve e-accessibility and physical accessibility of the UNED premises (Interview with co-ordinator)</p> <p>MOSEP "Teachers become 'learning companions' who facilitate independent learning and peer assessment during the portfolio process" (Interview with co-ordinator)</p> <p>Schome: conflict between the rules of Schome Park and the rules of real-world classroom scenario, which was difficult for both adults and children to adapt to and challenged the status and the role of the teacher</p>
<p>What kinds of problems militate against learning and inclusion outcomes, and what unforeseen, negative, additional and displacement effects are associated with the use of Learning 2.0 applications and initiatives?</p>	<p>The main barriers to positive inclusion outcomes encompass five main elements : technical issues, motivation and engagement issues, organisational issues, digital skills issues and finance and funding issues.</p> <p>Learning 2.0 environments involving novel forms of learning like 'open pedagogy' open up opportunities for the 'hard to teach' to engage in creative and self-paced learning. However, accrediting any achievements gained causes problems in a world of prevailing educational standards.</p> <p>We found no real evidence of 'negative' effects on personal and social skills associated with participation in Learning 2.0 – for example increased social isolation. However, in 'open pedagogy' and 'media rich' environments situations tensions were raised when users familiar with structured learning environments were asked to set their own governance rules.</p>	<p>Schome: the freedom of the virtual environment allowed the role of the learner to change throughout the project as well. During Phase 2, in order to maximise learner autonomy, there was also a significant decrease in staff-led activity. Whilst students had a greater role in the management and organisation of the project, they struggled with the lack of structure and showed a lack of focus: ". <i>I'm sure it would work much better if as well as discussions there were more practical learning events</i>" (User interview)</p> <p><i>BREAKOUT</i>: the programme disrupted existing timetabling and put extra pressure on teaching staff (Staff interviews)</p> <p>Mundo de Estrellas: , the technology is slow and outdated leading to technical difficulties for the users particularly because many of the software applications require relatively modern equipment to run them (SAQ data; staff interviews)</p> <p><i>BREAKOUT</i>: Web 2.0 tools like podcasting and weblog seen as too complex and too time-consuming in context of formal lessons. (Observation data)</p> <p>Notschool: Certificates not treated as equivalent to formal school qualifications (Staff interviews)</p>
<p>What kinds of new digital skills are emerging as a result of the use of Learning 2.0 applications?</p>	<p>Participation in these initiatives did lead to improvements in basic digital literacy across the board. However, the depth and quality of the skills acquired varies significantly in terms of factors like: the extent to which digital literacy is a key objective of the initiative, users' existing level of digital literacy, the governance structures and 'power dynamics' within the initiative, the availability and quality of mentors</p>	<p>Notschool: Notschool provides each student with a mini Mac with bundled Mac software including Garageband, iMovie, iPhoto, and Keynote. Specialist applications such as Adobe Photoshop and Cinema 4D can be provided (data from user SAQ)</p> <p>Mundo de Estrellas: 32% rated using computers for social networking as</p>

	<p>and tutors.</p> <p>In only a few of the cases is there clear evidence that Web 2.0 tools are supporting the acquisition of 'higher level' digital competences. These cases are the ones where sophisticated Web 2.0 tools – for example using immersive technologies and games - were deployed.</p>	<p>new skill acquired (SAQ data)</p> <p>MOSEP: 76% of users 'agreed' or 'strongly agreed' that it helped them to do more complex digital tasks like social networking (SAQ data)</p> <p>90% of students agreed that <i>'by working on my E-Me I have developed useful multimedia skills'</i> (2006 internal evaluation)</p> <p>Schome - students took part in Machinima projects and all developed Second Life skills. Students also used wikis, forums, blogs, Flickr and other Web 2.0 tools.</p> <p>Schomers developed extremely advanced digital media skills through participating in the project (Schome-NAGTY Final Report, May 2007)</p> <p>BREAKOUT: the proportion of students able to achieve the e-skills tasks set for them was surprisingly low. Less than 30% of school students completed their e-skills tasks over 3 workshops (Observation data)</p>
<p>What other, non-digital key competences for lifelong learning, are being supported by Learning 2.0 applications?</p>	<p>There is strong evidence the Learning 2.0 tools are associated with positive outcomes in developing 'soft skills' – both personal, like self-confidence – and social - like team-working and time management. We found no conclusive evidence of negative impacts – for example increased social isolation – associated with participation in Learning 2.0 environments, although there were some indications that existing 'skills gaps' amongst students in Web 2.0-rich environments could contribute to increasing skills gaps between students who are computer-literate and students who are not and, in turn, contributing to further feelings of exclusion from learning.</p> <p>There is less evidence that Learning 2.0 supports 'active citizenship', although some examples were identified.</p>	<p>Active citizenship and community building e.g. Notschool: <i>"N. has moved from a very isolated young man to one who has collaborated with two other researchers (from other LEAs) to run their own community. In addition he has asked to become a buddy, after asking how demanding the role was"</i> (Interview with Mentor)</p> <p>Self-esteem – Conecta Joven "Public award ceremonies held at the end of the courses give adult attenders an enormous sense of achievement in having attended the courses". (Interview with initiative manager)</p> <p>Increased confidence. Conecta Joven: 'I have learned to be patient, to explain myself better, to have more confidence in myself.' (Interview with trainer)</p> <p>MOSEP: 93% of students said they felt 'proud' of their electronic portfolios (MOSEP internal evaluation)</p> <p>MOSEP: 78% of users 'agreed' or 'strongly agreed' that taking part in the project improved their self-confidence. More importantly for adult learners, 89% of users 'agreed' or 'strongly agreed' that the project helped them to develop networks that provide opportunities (SAQ data)</p> <p>Team working Schome - in groups to run their own activities to reflect their interests, such as the Schome magazine, chess competitions, a Regatta, a real-time music concert, building a steam engine museum, film projects and organising traditional teaching sessions <i>"Things began to improve themselves when we learned how to build properly, and started to think what could we do here... it really gave us a sense of responsibility, leadership, ownership, communications, critical thinking"</i> (User interview)</p> <p>Communication and social skills . Schome: <i>One student admitted that she had difficulties in public speaking ... Private Messaging her with support, encouragement and suggestions boosted her confidence and communication skills and eventually she was elected as head of the SP government</i> (Schome Final Report, 2007).</p> <p>BREAKOUT: Key skills learned were: enhancement of transferable skills (information management, team-working, meta-cognitive skills, self-</p>

		presentation)' enhancement of life skills (identifying skills and talents, learning about difference, learning about social relationships, developing entrepreneurial skills (SAQ data)
In what ways are Learning 2.0 applications equipping users with skills that will increase their labour market opportunities?	We found no real evidence of a 'downstream' contribution to labour market mobility associated with Learning 2.0 initiatives. There is indirect and unverified evidence that Learning 2.0 is contributing to reducing unemployment in excluded communities. It should also be borne in mind that the case studies were not intended to assess long-term impacts.	<p>Notschool: 50% of students entered into further education, 26% entered college related employment and 18% entered fulltime employment (2005 Evaluation data)</p> <p>Assistive Technology Wiki: 50% believed that using the Wiki could contribute to improving job prospects (SAQ data)</p> <p>Conecta Joven: The young people acting as trainers acquire valuable teaching experience (Videoclip of Interview with trainer)</p> <p>MOSEP: only 11% of students agreed training could 'contribute to improving job prospects' (SAQ data)</p>

Table 11: Good practices: What lessons can be learned from which case?

	Profile	Outcomes	What works	Lessons learned for future
Notschool	'Low tech'. Asynchronous Web 2.0 using Firstclass. Constructivist 'open pedagogy' model. High degree of collaboration between all stakeholders. Strong and stable institutional base	98% learners re-engage in education process. Results show increased confidence and self-esteem. Web 2.0 develops technical skills – e.g. photoshop, web design. 91% achieve Level 1 accreditation (GCSE Grade D) The initiative shows poor results with children in care and in dysfunctional families.	Constructivist 'open pedagogy' – empowers the learner. 'On-demand' learning improves accessibility. Mentoring support and democratisation engages hard to teach in learning.	Problems encountered in accreditation – value and equivalence of certificates questionable. Improve links between Notschool and formal education system (referrals; accreditation) in order to make students achievements valuable. Need support from home environment
AT Wiki	Moodle; Media sharing – YouTube; Wiki; 'Routes to desire' – self-directed learning pedagogy	Small number of users. Discussion Forum most used – other Web 2.0 less used. Wiki used mainly by professionals – low level of disabled users. 'Dynamic learning' supported by combining video with social networking and discussion forum. High levels of satisfaction and reported impacts but high % passive users	Cost-effective using open source. Blending of Web 2.0 tools promotes 'on demand' learning. Feedback loop inputs user needs into product design	Build critical mass of users. Manage and balance needs of diverse users Ensure that 'less powerful' (i.e. non-professionals are actively represented.
Mundo de Estrellas	Sick children create and collaborate in 'virtual worlds' to learn about illness management; co-operation and some curriculum-based content. Media rich environment (Interactive games. Blogs; social bookmarking). Clear pedagogic model and strong delivery partnership	Very high user base and utilisation. Significant success in promoting collaboration between disparate groups (young people, families, professionals, administrators). Normalising institutionalisation and reducing dependency culture. Basic ICT skills delivered. Advanced ICT skills gained through Web 2.0 – e.g. gaming	Substantial funding breeds success. Strong partnership crucial. Web 2.0 supports learning and motivation. Significant involvement of health professionals crucial	Institutional and professional buy in is necessary. Integration within hospital culture supports success Web 2.0 can enable excluded young people to share their experiences and make sense of their condition

ALPEUNED	Low-tech platform (interactive Forum) but highly developed collaborative working and e-inclusion approach	Uses dotLRN 2.4. (disability standard) to make learning accessible. Organisational innovation – new support service for disability. Gathers evidence on disability needs. Shared problem-solving improves academic performance. Contributed to getting funding for 2 EU funded projects	Institutional support from University. Accessibility compliance - AA level compliance with W3C WAI WCAG. Creating community identity	Institutional buy-in required. Integration of initiative into University culture and structure is crucial for success. Relevance in terms of contribution to courses is required
Conecta Joven	Incorporated in initiative based on regional/community 'telecentres'. Aimed at supporting digital literacy and e-skills for socially and economically isolated. Web 2.0 emphasis is on staff development (not end users). Tools include Wikis, blogs and collaborative learning platform	High staff turnover affects continuity and knowledge loss. Lack of evaluation data on outcomes at regional centres makes it difficult to measure impacts. Some evidence that Web 2.0 improves training skills and production of learning content. New content created for end users.	Users obtain diplomas in ICT – increases motivation and buy-in to the initiative. Strong partnerships ensure continuity and sustainability. Volunteers make it viable and cost-effective.	Importance of 'motivators' in e-skills development. Partnerships with business, local councils and third sector crucial for sustainability. Volunteers pivotal to success
MOSEP	Collaborative content development system enables teachers and trainers to develop customised learning modules, in form of 'e-portfolio'. Created content is uploaded into wiki to provide evolving knowledge repository	Improved soft skills e.g. time-management and team-working. Improved student self-esteem. Advanced technical tools improved learning participation and outcomes especially for kinaesthetic learners. Web 2.0 supported teacher CPD	Student active participation in designing e-portfolio increased learning motivation. Shared roles between students and teachers supports co-production of knowledge. Consistent encouragement and support by 'learning companions'	Technical support vital in multi-media rich environment. New collaborative teacher roles vital
Schome	Aims to use virtual worlds to explore new educational possibilities. Media-rich environment – Second Life; Machinima; blogs; blikis (collaborative blogs); social bookmarking. Innovative 'Open pedagogy' model - Students are given a high level of responsibility and control	Supports active citizenship – students have control over governance of 'Schome Island' Expands learning horizons through virtual field-trips Virtual world Builds confidence – safe environment. Develops high-level e-skills.	Virtual world supports safe environment and encourages confidence. Evolving and adaptive technical and pedagogic approach incorporates learning from failure. Supportive community of practice.	Build learning into evolutionary technical/pedagogic model. Engage users in constructing governance rules. Different capabilities and backgrounds of students creates tensions.
BREAKOUT	Project developed 'lifeswapping' collaborative learning model – getting range of actors in 'offending scenarios' to step into each others shoes. Technology combines on-line Forum; content co-production and editing; blogs; podcasts; social bookmarking	Project created empathy and awareness of problems of crime and drugs. Users rated programme very useful for realising importance of using their talents. Significant variability in use of Web 2.0 – linked to gender, ethnicity, educational performance. Problems with timetabling and organisational culture of the school inhibited outcomes.	Life-swapping model enabled students to step into the shoes of others. Blended model enriched learning outcomes. Team working amongst students. Social bookmarking – especially YouTube – enabled Web 2.0 to be relevant to student lives.	Context is everything – some students have exceptional social networking skills and poor knowledge application skills. Need management and staff buy-in. Need sustainability strategy to promote long-term impacts. Keep it simple – students find content management difficult.

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Title: Good Practices for Learning 2.0: Promoting Inclusion. An In-depth Study of Eight Learning 2.0 Cases

Authors: Joe Cullen, Clare Cullen, Damian Hayward and Veronique Maes

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Technical Note

Abstract

Over the last few years, “web 2.0” or “social computing” applications like blogs, wikis, photo- and video-sharing sites, as well as online social networking sites and virtual worlds, have seen unprecedented take up. This has changed the way people access, manage and exchange knowledge, and the way they connect and interact. Social computing applications are extremely versatile and offer flexible and dynamic learning opportunities that are often more appealing and engaging than traditional learning arrangements. They have therefore considerable potential for attracting and (re-)engaging learners who are at risk of exclusion from the knowledge society.

Due to the novelty of social computing, take up in education and training is still in an experimental phase. In Europe, there are only a few projects and initiatives, which try to exploit the potential of social computing for learning purposes, and even fewer addressing social inclusion. The current study investigates in depth eight Learning 2.0 initiatives targeted at learners at risk of exclusion from the knowledge-based society. The initiatives studied are different in focus and address a variety of audiences and learning objectives, illustrating the scope and variety of Learning 2.0 for inclusion. The case assessment critically examines impacts and outcomes, as well as obstacles and barriers, and factors for failure and success. All cases highlight the vast potential of social computing for opening up learning opportunities for those at risk of exclusion, while outlining existing obstacles and bottlenecks.

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