

**A comparative investigation of the use of
digital technologies to facilitate school
collaboration within the framework of the
eTwinning programme**

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Abstract

This thesis looks at how digital technologies can create opportunities for online collaboration across schools within the framework of the eTwinning programme, an EU initiative that seeks to promote web-based learning and collaboration between schools across Europe. A socio-technical approach was employed, focusing on the role of social context in shaping the technology use surrounding the eTwinning activities. This ‘social shaping of technology’ approach allowed exploration of the range of social actors and factors that influence the implementation of digital technologies for school collaboration at *micro*, *meso* and *macro* levels of analysis.

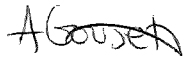
Through a comparative, qualitative case study of four different eTwinning projects in the UK and Greece, this thesis investigates how digital technologies such as wikis, blogs and discussion forums were used as online collaborative environments. Data collection took place during the course of the academic year 2009-2010, consisting of semi-structured individual and group interviews alongside classroom observations and online documentary analysis.

The findings suggest that students’ and teachers’ use of digital technologies and, in particular web 2.0 tools, was influenced by a range of social issues relating to the wider school context. As such the tools *per se* did not lead to noticeable changes in practice – especially regarding collaborative activity. Specifically, all four case study projects were bounded by wider settings and factors such as time, resourcing, assessment regimes and ‘fit’ with curriculum. This thesis argues that amidst the enthusiasm that surrounds digital technologies in education, there is a pressing need for more critical consideration of the socially and institutionally shaped realities of use. The thesis concludes with a range of suggestions for the future improvement of such web-based collaborative initiatives.

Declaration

I hereby declare that, except where explicit attribution is made, the work presented in this thesis is entirely my own.

Signature:

A handwritten signature in black ink, appearing to read 'A. Gouseth'.

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Table of Contents

List of figures	8
List of tables.....	8
Chapter 1: Introducing the concept of web 2.0 – definitions and debates.....	11
Introduction.....	11
Web 2.0 tools and genres.....	13
Socialising the playful.....	14
Socialising the expressive	16
Socialising the reflective	20
Socialising the exploratory.....	21
The characteristics of web 2.0	22
The conditions of web 2.0	27
Conclusion	29
Chapter 2: Web 2.0 in education: theoretical underpinnings and practical implications.....	32
Introduction.....	32
Educational promises and fears over web 2.0	35
The educational promises of web 2.0: the ‘booster’ discourse	35
The educational radicalisms of web 2.0: the ‘anti-schoolers’ discourse.....	38
The educational fears over web 2.0: the ‘doomsters’ discourse.....	41
The educational challenges of web 2.0: the ‘critics’ discourse.....	43
Educational theories underpinning the implementation of web 2.0 in education.....	45
Learning: Social Constructivist and constructionist arguments for web 2.0 use	46
Communities: creating online communities of practice and knowledge-building networks	48
Theories of individual and organisational improvement in education	50
Web 2.0 use in practice.....	53
Access to and use of web 2.0 tools in schools: findings from survey research.....	54
Use of specific web 2.0 tools in schools: findings from the empirical research literature	56
Conclusion	66
Chapter 3: The nature and form of school collaboration.....	69
Introduction.....	69
Defining School Collaboration.....	70
Towards a model of school collaboration.....	73
Issues related to intra-national collaborations	74
Issues specifically related to international collaboration.....	79
State-driven initiatives.....	80
NGO initiatives.....	82
Commercially-driven initiatives.....	83
Issues related to the use of ICT in school collaboration	84
Web 1.0 based school collaboration programmes.....	87
Web 2.0 based school collaboration programmes.....	89
Conclusion	94
Chapter 4: Research approach and research questions	95

Introduction.....	95
The social shaping of technology approach.....	95
Imperatives for the increased use of digital technologies.....	102
Conclusion	105
Chapter 5: Methodology	107
Introduction.....	107
Research Design	107
Adoption of a case study approach.....	107
Consideration of other potential research designs.....	110
Choice of Methods within the Case Study Research Design	111
Primary Data Collection	112
Research Methods.....	117
Primary data collection.....	118
Ethical considerations.....	124
The practicalities of the research design	125
Analysing the data	126
Issues of Reliability, Validity and Generalisability	128
Conclusion	128
Chapter 6: The West Midlands case study	130
The school.....	130
The eTwinning project: The Spartans.....	132
The UK participants.....	133
The Greek partners	134
Drivers for participation and initial expectations	136
Participation and expectations: pupils' perspectives	138
The tools	139
The journey: implementation of the project in practice.....	142
Technical inhibitors	142
Wikis and blogs: students' (un)familiarity with the tools	144
Students' in- and out-of-school use of ICTs	145
Students' use of and engagement with the TwinSpace tools	147
Editing others' work.....	149
Copying and pasting: the Wikipedia example.....	151
Collaboration and communication: from enthusiasm to disappointment.....	155
Teaching and learning impact	160
Conclusion	161
Chapter 7: The London suburban case study	162
The school.....	162
The eTwinning project.....	163
The UK participants.....	164
The partner school	165
Drivers for participation and initial expectations	165
Participation and expectations: pupil's perspectives	167
The tools	168
The journey: implementation of the project in practice.....	169
Technical inhibitors	171

Wikis: students' (un)familiarity with the tools.....	173
Students' in-and out-of-school use of ICTs	174
Students' use of and engagement with the wiki.....	178
Editing others' work and commenting	183
Copying and pasting.....	185
Collaboration and communication	185
Teaching and learning impact	187
Time issues	188
Conclusion	188
Chapter 8: The Athens suburban school case study.....	189
The school.....	189
The library	190
The eTwinning project.....	191
The Greek participants.....	193
The Danish partners	194
Drivers for participation and initial expectations	194
Participation and expectations: pupils' perspectives	197
The tools	197
The journey: implementation of the project in practice.....	199
Students' profiles on TwinSpace.....	203
The Danish 'drifting away'	204
Technical problems	206
Time issues	207
Limited student motivation	208
Students' in- and-out-of-school use of ICTs	208
Students' use of and engagement with TwinSpace.....	210
Collaborative writing and commenting	213
Copying and pasting.....	214
Collaboration and communication	215
Teaching and learning impact	216
Conclusion	217
Chapter 9: The Athenian inner-city school case study.....	219
The school.....	219
The eTwinning project.....	220
The project partners	221
The Greek participants.....	222
The Italian partners	223
Drivers for participation and initial expectations	224
Participation and expectations: pupils' perspectives	226
The tools	227
The journey.....	230
Students' in- and-out-of-school use of ICTs	233
Technical inhibitors.....	234
Time issues	235
Limited student motivation	237
Conclusion	238

Chapter 10: A comparative case studies analysis.....	239
Introduction.....	239
RQ 1: Creating opportunities for online student interaction and collaboration.....	240
Engagement with the project and perceived benefits and opportunities	240
Issues of collaboration and co-operation.....	241
The need for partner reciprocity	243
Language issues.....	244
RQ 2: How do these opportunities ‘fit’ into existing school practices?	245
The ‘goodness of fit’ between eTwinning and the institutional structures of the schools	245
The role of the overarching eTwinning organisation	247
RQ 3: What are the drivers and inhibitors for engaging with eTwinning for teachers?.....	249
Drivers for participation	249
Technical issues.....	251
RQ 4: What are the drivers and inhibitors for engaging with eTwinning for students?.....	253
The realities of student participation	253
Bringing old work practices into ‘new’ contexts	258
The tendency to migrate to familiar tools and online spaces	260
Conclusion	261
Chapter 11: Conclusion	262
Introduction.....	262
Linkages and disconnections with empirical findings in the existing literature.....	262
Linkages and disconnections with prevailing commentary on web 2.0	268
Rethinking the social context of online school collaboration.....	273
Acknowledging the limitations of the present study	275
Towards a framework for future research and discussion of technology and education....	278
Bibliography	284
Appendices	319

List of figures

Figure 1: Web 2.0 Meme	23
Figure 3.2: Inventory of reasons for failed communication in collaborative projects .93	
Figure 4.1: Different levels of analysis for the current study	101
Figure 4.2: ‘The benefits of eTwinning’	103
Figure 6.2: Rural upper high school in Northern Greece.....	136
Figure 6.3: Screenshot of the Pupils Corner on TwinSpace	140
Figure 6.4: Screenshot of the Pupils Corner on TwinSpace	141
Figure 6.5: Screenshot of the project’s ‘Home page’ on TwinSpace	142
Figure 6.6: Screenshot of blog posts by Megan.....	148
Figure 6.7: Screenshot of student blog entries.....	149
Figure 6.8: Screenshot of plagiarised wiki entry (with original photos and hyperlinks).....	153
Figure 6.9: Screenshot of plagiarised wiki entry	154
Figure 6.10: Screenshot of original wiki entry (plain text).....	154
Figure 6.11: Screenshot of original wiki entry (experimenting with other features)..	155
Figure 6.12: Screenshot of forum posts	158
Figure 7.1: London suburban school.....	163
Figure 7.2: Screenshot of the wiki home page.....	169
Picture 7.3: Isabel’s classroom.....	172
Figure 7.4: Mary’s profile	180
Figure 7.5: Sarah’s profile.....	180
Figure 7.6: Screenshot of the wiki page on Berlin.....	181
Figure 7.7: Screenshot of the wiki page on films.....	181
Figure 7.8: Screenshot of film discussion.....	184
Figure 7.9: Screenshot of the discussion forum	185
Figure 8.1: Athenian suburban school	189
Figure 8.2: School library	190
Figure 8.3: School library (the computer ‘hub’)	191
Figure 8.4: Screenshot of the project’s TwinSpace (old version).....	198
Figure 8.5: The discussion forum.....	201

Figure 8.6: Message on profile information.....	202
Figure 8.7: Reminder about message on profile information	202
Figure 8.8: Jane's profile on TwinSpace.....	204
Figure 8.9: Nadia's profile on TwinSpace	204
Figure 8.10: Student post in the forum section 'Music'	211
Figure 8.11: Comment on the 'Music' section of the forum.....	212
Figure 8.12: Screenshot of Elytis's biography post	214
Figure 9.1: Athens inner-city school.....	219
Figure 9.2: Athens inner-city school library (the computer 'hub')	220
Figure 9.3: Screenshot of the project's TwinSpace	227
Figure 9.4: Picture from class observation 1.....	228
Figure 9.5: Wiki entry	229
Figure 9.6: Blog post by the Italian teacher	229
Figure 9.7: Blog post by the Greek teacher.....	230
Figure 11.1: Implementing change at micro-, meso- and macro-level actors	279

List of tables

Table 1: Some Schematic Differences between Web 1.0 and Web 2.0	24
Table 2.1: Estimated average time spent by learners on computer related activities at school and outside of school	56
Table 3.1: Types, levels, models and aims of school collaboration.....	73
Table 5.1: Description of projects and schools	122
Table 5.2: Data collection procedures.....	124
Table 6.1: The Sparta project	133
Table 7.1: Student and teacher wiki use.....	179
Table 8.2: Activity on the TwinSpace forum.....	212
Table 9.1: Summary of project	221

Chapter 1: Introducing the concept of web 2.0 – definitions and debates

Introduction

The last five years have seen the growing popularity of a number of new internet tools, which can be said to differ substantially from the forms and the initial concept of the World Wide Web as it emerged into mainstream technology use almost two decades ago. This has led to the growing use of the term ‘web 2.0’ to describe a group of web tools and services that can be seen as especially connective and social in nature (Alexander, 2006). The origins of the term web 2.0 are usually traced back to the technologist and publisher Tim O’Reilly (2005) and ‘web 2.0’ has been gaining in popularity ever since then – signalling a change in the ways digital technologies are being used. As Haythornthwaite and Andrews argued (2011, p.94) ‘what is new about current technologies is that they bring into institutions and organisations a suite of practices that originate in open, web-based interaction’. A variety of other monikers are associated with the notion of web 2.0 – most popularly ‘social media’, ‘people-powered web’, ‘participatory media’ and ‘social software’. In particular web 2.0 is seen by many commentators as being inextricably linked, if not synonymous, with the notion of ‘social software’, a term first used in 2002 by the technologist Clay Shirky to describe software that facilitates undirected or task oriented group interaction and collaboration (Shirky, 2003). Subsequent definitions have positioned social software not only as software that allows online interaction and collaboration but also that ‘aggregates the actions of networked users’ (Mejias, 2005). Thus, as boyd suggested, the term ‘social software’ not only encompasses the technologies but it also emerges as a social movement that allows interaction ‘with people and data in a fluid way’ (boyd, 2006, p.17).

The notion of web 2.0 moved from a niche hobbyist concern to popular prominence in 2006 when Time magazine selected ‘You’ as person of the year (Grossman, 2006). This provocative choice for the magazine’s prestigious annual award was intended to refer to the increasingly noticeable achievements of the anonymous mass of contributors of user-generated web 2.0 content in ‘seizing the reins of the global

media [...] founding and framing the new digital democracy, [...] working for nothing and beating the pros at their own game' (ibid, n.p.). Whilst this choice was widely criticised, it marked the growing societal importance of web 2.0 and the degree of attention it had attracted amongst mainstream media channels by that time. Indicative of the hyperbole generated by the '2.0' tag throughout the mid to late 2000s was the growing attachment of the '2.0' suffix to various other terms such as 'business 2.0', 'enterprise 2.0', 'education 2.0', 'library 2.0', and even 'identity 2.0', all implying a shift to a new reality, and replacing the 1990s '@' as the symbol of all things technological.

This growing acceptance in popular discourse contrasts with the considerable scepticism amongst academic and technologic commentators concerning the 'neologism' of web 2.0. For instance, the technologist Gina Bianchini dismissed web 2.0 as an ill-defined 'buzz term' that did not merit any further definition as no collective agreement on an exact definition could be reached (Bianchini, in Jones, 2008). On the other hand, a stridently critical approach has been adopted by popular commentators such as Andrew Keen, who reject notions of increased collaboration and communal action. Keen (2006) for instance questioned the notion of the 'new' web 2.0 platform that allows online communities to publish blogs and digital media and denounces the 'web 2.0 dream' as 'Socrates's nightmare' arguing that every citizen can be equipped with the tools to become an opinionated artist or writer. Even more sceptical critics attach a more ominous moniker to web 2.0, that of 'second dot-com bubble' or 'bubble 2.0' – therefore foreseeing that the Web 2.0 'bubble' is ready to burst if not already deflating (Lewis, 2011).

Notwithstanding these controversies and tensions, the notion of web 2.0 has been used to signal the evolution from passive consumption of information to more active interaction, creation and sharing with the use of light-weight services that allow users to make changes to content. As Haythornthwaite and Andrews described (2011, p. 90):

While web 1.0 has been about being seen, Web 2.0 is about being seen with and by others, and becoming part of a conversation and community. The focus is on *participation* in blogs, commentaries, wikis, Twitter, and YouTube, with broad access, contribution, retrieval, rating, classifying and evaluating. Web 2.0 operates on simultaneous updating, shared production, and a final product that is greater than the sum of the parts.

In a broader sense educationalists have been content for the large part to define web 2.0 in neutral terms. For instance, web 2.0 has been perceived as a melting pot where the various social technologies and web-based applications co-exist with notions such as focus on user-generated content, sharing and collaboration and new ways of interaction (Franklin and Van Harmelen, 2007). It is clear, therefore, that if this thesis is to pursue a rigorous investigation of the educational implementation of web 2.0 then more detailed definitions are required. One way to better conceptualise web 2.0 is to first examine the technologies and tools that the term embraces.

Web 2.0 tools and genres

Whilst many academic and technological commentators attempt to categorise the range of web 2.0 tools according to the functions they seek to fulfil, in practice most of the web 2.0 technologies 'incorporate functions from more than one category' (Mejias, 2005, p.3). Therefore, it can be argued that the creation of a collectively acceptable taxonomy of web 2.0 tools is challenging and no list of the technologies can be conclusive and exhaustive. In particular, since new applications emerge and changes take place 'at a clock speed several orders of magnitude faster than that of academic research' (Beer and Burrows, 2007, n.p.).

These difficulties notwithstanding, some authors have attempted to produce descriptive frameworks of web 2.0 technologies. For example, Owen *et al.* (2006) categorised social software tools according to the purpose they served and the technologies they incorporate. In this manner, five 'umbrella' categories were established: i) text-based social software that includes applications such as weblogs, wikis, folksonomies and aggregators; ii) audiovisual social software like Flickr, radiowaves and CoDECK; iii) spatial and geographic social software, with Google Earth being the most representative example; iv) mobile phone software and 'finding like minds' software such as profile matching systems; v) and last personal networks (Owen *et al.*, 2006). Explicit as this categorisation may be, it is by no means exhaustive as social networking sites and mash-up applications, largely associated with web 2.0 technologies, were not included. On the other hand, Beer and Burrows (2007) named four different types of web 2.0 applications: wikis, folksonomies, mash-ups and social networking sites. Alternatively Alexander (2008)

divide web 2.0 ‘projects and practices’ according to the ‘set of digital strategies’ they abide by such as social networking, microcontent and social filtering.

All of these attempts of classification highlight the ‘slippery’ and fast changing nature of web 2.0 tools, applications and services. Indeed, if we are to accept that the notion of web 2.0 does not simply concern the constantly emerging technological applications but rather a wider ethos that centres on collaboration and openness, then it is perhaps unwise to attempt to categorise these tools merely according to their shared technical qualities. In this sense, attention should be drawn to the taxonomy adopted by Charles Crook which is based on ‘four typically human dispositions: the playful, the expressive, the reflective and the exploratory’ while acknowledging that the ‘lever of transformation’ is the participatory and inherently sociable nature of web 2.0 (Crook, 2008, p.7). This taxonomy recognises the social and technical aspects of web 2.0, whilst also providing a focus for the learning associated with the use of web 2.0. It is this taxonomy that this thesis will adopt to present the web 2.0 applications and services in detail, acknowledging nonetheless that the notion of ‘openness’ is inextricably linked with web 2.0 both in theory and in practice and therefore strict boundaries cannot be determined since cases of overlapping will occur. In more detail, then, Crook proposed the following four characteristics:

Socialising the playful

First, Crook recognized that participation in virtual worlds and online gaming is becoming increasingly popular in recent years and both adults and children have been spending growing amounts of time online, engaging in activities that can be categorized as playful in nature. Games have undoubtedly had a high profile in the history of the computer industry as the playful disposition is prevalent throughout human nature.

Massively Multiplayer Online Role Playing Games

Web 2.0 technologies have made possible the shift from a typically private and rather impersonal way of computer game playing to a competitive or collaborative one. For example, broadband connectivity and new online computer game platforms have facilitated the rise of Massively Multiplayer Online Role Playing Games (MMORPG) into mainstream use, with games such as World of Warcraft and

RuneScape having great appeal and attracting millions of players. These games allow not only for online virtual combat but they also foster communication and interaction amongst players and ‘support the pleasures associated with exploration, chat, experimentation, improvisation, humour and role-playing’ (Carr, 2008, p.13). In addition, recent years have seen the emergence of gaming development and distribution platforms such as ‘Kongregate.com’. These allow game developers and players to test, rate and share games on the site but also to chat online while they play and are seen to be creating online affinity spaces for participants.

Virtual Worlds

Virtual Worlds such as Second Life and Club Penguin offer such diverse and rich computer-based environments that exceed the limits of traditional computer games and resemble more an online virtual community where users can live virtual lives through their avatars and engage in various sort of interaction with other residents. In particular, Second Life, has attracted wide media coverage as well as academic critique, claiming to be the web’s user-created, largest, virtual community. Second Life is an online 3D virtual world launched in 2003 where registered users create a representation of themselves called ‘avatar’ and can then envision and customise it according to their preferences. Unlike many other virtual realities, Second Life is not a game, and ‘there are no conflicts that must be resolved, no rules of game-play, and no requirements for progressing (“leveling”)’ but it is mainly used as a space for social interaction (Stevens *et al.*, 2010, p. 379). As such, Second Life is seen as a dynamic and interactive virtual environment that can ‘enhance social communication, interaction and information sharing... allowing users to experience situations beyond one’s physical and financial constraints’ (Pita and Pedro, 2012, p.100). Similarly, within an educational context Second Life is said to have several advantages for educational professionals, and possesses great potential as an innovative teaching tool and it is seen to allow users to explore different virtual spaces as well as meet, interact, collaborate and create their own learning environments (Stevens *et al.*, 2010). In particular, according to Carter (2010, p.373) ‘the interaction, possibility for international collaboration and communication and the constructivist learning that is possible from within SL is nearly unmatched in any current virtual environment’.

Although virtual worlds have had a long history and were mainly the domain of older teens and adults, in recent years they have also become particularly attractive to children and young people – examples of the sites that have gained popularity and are geared to younger audiences include ‘Webkinz’, ‘Neopets’, ‘Club Penguin’ and ‘Barbie Girls’ (Cowan, 2010; Marsh, 2010). Club Penguin, in particular, consists an online community for children aged 6 to 14 in which users can create an avatar of a penguin and take part in games and activities and solve puzzles either alone or with friends as they travel through a virtual winter wonderland (Walker, 2008). Apart from the dimension of the playful engagement with online virtual worlds, these type of environments are also seen to ‘afford new avenues for identity formation’ with regards to how users choose to present themselves and also interact with others within these sites (Burley, 2010, p. 11).

Socialising the expressive

Web 2.0 is also seen to have enabled user-generated content, shaping the way in which technologies and applications are used in order to create as well as share and broadcast materials online. The potential for (re)creation of original material combined with the new tools that are widely and freely available have allowed the creation and posting of user-generated content. In his taxonomy, Crook includes media design, sharing, and publication software under the ‘expressive’ label but he places tools such as weblogs and wikis under the ‘reflective’ category. Whilst weblogs can be identified as a web 2.0 socialised form of personal reflection (Crook, 2008), however, they also embody strong qualities of personal expression. Since forming an explicit taxonomic system of categorisation can be difficult when social software qualities overlap, the following discussion will classify weblogs and wikis as text-based social software serving both the expressive and reflective human disposition.

Text-based social software

Weblogs or ‘blogs’ are web and browser-based journals arranged in reverse chronological order where authors can post text, pictures and sound or video files and readers can leave comments on these postings. They are seen as ‘simple content management tools enabling non-experts to build easily updatable web diaries or online journals’ (Kamel Boulos and Wheelert, 2007, p.5) and they are free and easy

to create and contribute to. Blog posts are often ‘tagged’ with keywords facilitating a theme-based categorisation of posts rather than a strictly reverse chronological one. It has been argued that the simplicity of creating and updating blogs empowers readers to write, evoking the much celebrated ‘read/write’ nature of web 2.0 (Alexander, 2008). In this sense, blogs are seen to lead to a new form of digital democracy, a people-powered web that embraces openness and new ways of group interaction and allows for ‘citizen journalism’ (Rheingold, 2008).

Additionally, blogs are said to encompass a number of technical characteristics that facilitate the formation of online communities and the linking among users. A blogroll is a list of weblinks of other authors and affiliated weblogs, similar to a ‘favourites’ list (Anderson, 2007), which enables bloggers to form virtual bonds or communities, while ‘trackback’ functions enable them to keep track of referencing to their posts (Owen *et al.*, 2006). Blogs can also be used in line with syndication technologies to keep authors and audiences up to date with new content while blog search engines scour the ‘blogosphere’ and facilitate the quest for weblogs of specific content. As Pachler and Daly (2009, p.8) argue, the blogosphere, with its importance in facilitating online communication, arguably enjoys increasing importance in informal, as well as formal, learning contexts’. It is widely perceived that weblogs are a centrepiece to web 2.0 taxonomy (Anderson, 2007), while their massive appeal and popularity amongst technologists can be greatly attributed to their social, interactive dimension that distinguishes them from the preceding forms of online publishing. Additionally, the interactive nature of weblogs is often seen as a means of stimulating reading and motivating learning for foreign language learners (Yang, 2009).

Similarly, a ‘wiki’ is an online collaborative space where information can be shared, created and edited by anyone who is allowed access – with the term widely perceived to be the abbreviation of ‘the Hawaiian phrase for ‘quick’ (‘wiki wiki’). Unlike blogs, wikis are organized in terms of content rather than in chronological order, and hypertext-style linking between pages underlies greatly the philosophy of wiki creation. In particular, wiki applications are said to provide an inexpensive but effective communication and collaboration tool. They can be used to publish new and edit existing content and familiarize students with writing for larger audiences

whilst they also allow community members to be informed of any changes through email or RSS notifications or 'roll-back' to earlier draft versions and restore to previous condition (Lamb 2004; Anderson, 2007; Wheeler *et al.* 2008).

The underpinning philosophy of the wiki ethos appears to be a combination of the notions of collaboration and contribution, although as Shirky (2003, n.p.) has argued 'a wiki in the hands of a healthy community works. A wiki in the hands of an indifferent community fails'. A variety of free online wiki engines exist to allow an individual or a group to create and share a wiki project and the main underlying principle of wikis is that they are free and open to anyone who wishes to take part as 'authoring software, permissions, or passwords are typically not required' (Lamb, 2004). Nonetheless, wiki creators are offered the option to restrict access to particular users and determine the desired degree of privacy, such as in the case of wiki use for educational collaborative projects.

The level of openness allowed by wikis undoubtedly generates scepticism as regards the accuracy and reliability of their content, and it has been argued that 'when poorly managed, a wiki can evolve into a soup of tenuously related pages that are difficult to use' (Phillipson and Hamilton, 2005, n.p.). By contrast, such open environments are seen to cultivate participation as well as a 'strong sense of common purpose' and 'the proportion of fixers to breakers tends to be high' (Lamb, 2004). A different issue associated with the open nature of the wikis is the case of insufficient referencing whereupon intellectual property issues may arise. Nonetheless, wikis have been adopted to support collaborative educational projects and have been acknowledged as an appropriate tool for enhancing social constructivist learning environment (Bruns and Humphreys, 2007).

A recent manifestation of the wiki ethos can be found in the development on online collaborative writing applications that combine the properties of office style software and the collaborative nature of wiki technologies. Applications such as the 'Zoho writer', 'Google Docs' and 'ThinkFree' allow users to create, edit, save and share files online either individually or collaboratively. Still, their popularity has not scaled up compared to the other web 2.0 technologies partly because ubiquitous connectivity is a prerequisite and also because users appear sceptical towards issues of file protection and security.

Multimedia-based social software

Multimedia-based social software are tools that empower people to create and share content online and are based on the notion that 'users are not just consumers but contribute actively to the production of Web content' (Anderson, 2007, p. 10). Most popular examples of multimedia-based social software include Flickr (photographs), YouTube (video) and Odeo (podcasts). All these tools share the characteristics of participatory media that allow the sharing and distribution of online materials and facilitate online commenting, interaction and the creation of online communities.

Flickr, for example, is an image and video hosting website launched in 2004 that allows for easy and instant online publishing and sharing of images while its registered users can select between creating a public library accessible by all other registered users or privately share photographs within a group of 'friends' and/or 'family'. Flickr's distinct quality that differentiates it from preceding photograph-storage applications such as Ofoto is that it allows the posting of comments by other registered users, the formation of 'groups' based on shared interests and the participation in discussion forums, 'making it a photograph-sharing rather than photograph storage application' (Selwyn, 2008a, p.4).

YouTube on the other hand is an 'online video repository' (Beer and Burrows, 2007) created in 2005 that supports the uploading, viewing and sharing of video files. Registered users can upload an unlimited number of videos and relatively low cost media technologies for creating videos such as inexpensive hand-held cameras as well as cameras incorporated in mobile phones have made this feasible. Another factor that is said to have contributed to the wide popularity of YouTube is associated with 'people-powered journalism' in the sense that it allows the dissemination of stories that would perhaps remain uncovered in other means of mainstream media (Sternberg in Jones, 2008). Videos that would never receive public broadcast in a news channel have the potential of reaching a great audience than ever before. Whilst a number of intellectual property and personal data rights issues arise with this free flow of information, user-generated online videos have been perceived as an effective tool with the potential not only to enhance interactive expression but also to facilitate democratic discourse within the virtual public sphere (see Milliken *et al.*, 2008).

Similarly to the popularity of user-generated online video creation, the increased creation and distribution of shared audio data has also resulted in a large number of 'podcasts' being made available online. Podcasts are 'audio recordings, usually in mp3 format, of talks, interviews and lectures, which can be played either on a desktop computer or on a wide range of handheld mp3 devices' (Anderson, 2007, p. 10). Allied to this is the growing popularity of 'video podcasts' or 'vodcasts' and Odeo is to the present the most popular online directory for syndicated audio and video feeds and it also encompasses tools that allow users to create, record, and share podcasts. Alongside this trend of the creation and sharing of multi-media content is the notion of 'mashups' and 'remixing'. Mashups are built on the notion of conflating two or more applications or services in order to create an original service (Maness, 2006, p. 9) and they can take various forms such as data, commercial and business mashups. The most common and popular example of mashup use is the integration of Google Maps to add location information and directions to other webpages.

Socialising the reflective

Social Networking Sites

It is widely perceived that social networking sites adhere to the interactive and communicative philosophy of the social web and are a centrepiece to its taxonomy. Social networking sites have been highlighted as the most popular and socially significant of the web 2.0 applications especially in regard to their growing number of users and the convergence of other applications (Beer and Burrows, 2007). Social networking sites have been defined as web-based services that allow registered users to build a public or semi-public profile, create a list of other like-minded 'friends' and 'view and traverse' their list of connections allowing for the creation of wider networks and connections that otherwise would not have been possible (boyd and Ellison, 2007). The profile creation has also been described as the process where one can 'type oneself into being' (Sundén, 2003 in boyd and Ellison, 2007) and depending on the particular type of the social networking site there is a range of available applications that allows users to construct and project their desired online identity: they can upload an avatar photograph as well as photographs of friends and

family, provide background information about themselves (status, occupation, interests etc.), integrate lists of their favourite music, films or books and at times customise their webpage to the desirable effect.

Social networking sites have increased both in range and popularity over the past five years, with Facebook, MySpace and Twitter boasting hundreds of millions of users worldwide. The underlying idea of social networking sites is that of exploring the profiles and interests of users and forming online communities irrespective of geographical boundaries. As Selwyn (2009a, p.157) described, 'SNSs are personal and personalisable spaces for online conversations and sharing of content based typically on the maintenance and sharing of "profiles" where individual users can represent themselves to other users through the display of personal information, interests, photographs, social networks and so on'. As such, communication and interaction is facilitated by technologies such as comments, private or instant messages, built-in blogging, photo-sharing, mobile interaction and other applications while 'connections stretch out across physical and virtual spaces' (Beer and Burrows, 2007, p.4). As such, the rapid increase in the number of emerging new social networking sites prompted the technologist Clay Shirky to come up with the term 'Yet another Social Networking Service' in 2003 (Shirky, 2003). Meanwhile, some communities like Facebook have a global appeal whereas other networks such as the Brazilian 'Orkut' are more nationally focused – whatever the case, the appeal of SNSs demonstrates how users 'will invest time and energy in building relationships around shared interests and knowledge communities' (Maloney, 2007, p.26).

Socialising the exploratory

Social bookmarking, tagging and folksonomy tools

The volume of the new information added daily online requires tools that enable users to navigate and filter this information as well as share it within their online communities. Web 2.0 syndication and notification applications as well as social bookmarking and folksonomic services have been created to facilitate users' daily searching and filtering of new content. In particular, social bookmarking is a web service that allows the storing, sharing and searching for web bookmarks in a format accessible via the internet rather than within the client browser. 'Delicious', founded

in 2003, is perceived to be the innovator of these services and is based on a non-hierarchical keyword categorisation system where freely chosen words known as 'tags' are attached to each of the bookmarks. Tags are based on the concept of 'folksonomy' defined as 'the process of organising information through use-generated tags' (Owen *et al.*, 2006, p. 17), they can be arranged into concept maps known as 'tag clouds' and shared online.

The application of 'tagging' has extended beyond website bookmarking and has been adopted by other text and multimedia-based social software services such as Flickr, YouTube, weblogs and social networking sites. All these services share a folksonomic system of categorising the created and shared content. 'Tags' are attached by users to photographs, videos, podcasts or music so as to define content and to facilitate searching, filtering and categorising. The use of tagging has rapidly spread and its popularity and power lies greatly in its social nature. Examining the tags attached by others provides potentially useful insight into the way content is perceived and stand as a 'rare case of people connecting through shared metadata' (Alexander, 2006, p.36). Syndication and notification applications on the other hand provide means of easily keeping up-to-date with newly uploaded or edited content via RSS feeds. An aggregator or feed reader is used to 'centralise all the recent changes in the sources of interest, and a user can easily use the reader/aggregator to view recent additions and changes' (Franklin and Van Harmelen, 2007, p.7).

The characteristics of web 2.0

The tensions that have arisen over the definition and the impact of web 2.0 illustrate its multifaceted nature, denoting that web 2.0 can be used as an umbrella term to include not just the different tools but also the shift in the ethos behind the ways these technologies are used. As Merchant argues (2009, p.108) 'despite on-going debates about the impact of the so-called social web, the term Web 2.0 seems to me to be useful in drawing attention to new kinds of interactivity and describing a second wave of enthusiasm for the internet in the popular imagination'. Equally, other commentators have talked about the 'many faces of web 2.0' and have proposed interpreting it from different perspectives: 'Web 2.0 (1) as a set of social

relations, (2) as a mode of production and (3) as a set of values' (Postigo, 2011, p.181).

Therefore, web 2.0 should not be seen simply as a range of new tools or an increase in the number of users and broadband speed – instead web 2.0 enthusiastic supporters would argue that it is above all the underlying ethos that has changed, bringing interaction and collaboration in the limelight. As Downes (2005, n.p.) argues, 'what is important to recognize is that the advent of the Web 2.0 is not a technological revolution, it is a social revolution'. Indeed, the world wide web is often described as a platform where users can (re)create, share and re-configure their own data, the software improves as more people use it leading to an on-going state of 'perpetual beta' development with a focus on dynamic interaction and collaboration among online communities rather than completed products. The numerous technical developments outlined above may have allowed an 'always on' pattern of internet use but the most interesting result is associated with the new patterns of communication and collaboration that have emerged (Crook, 2008).

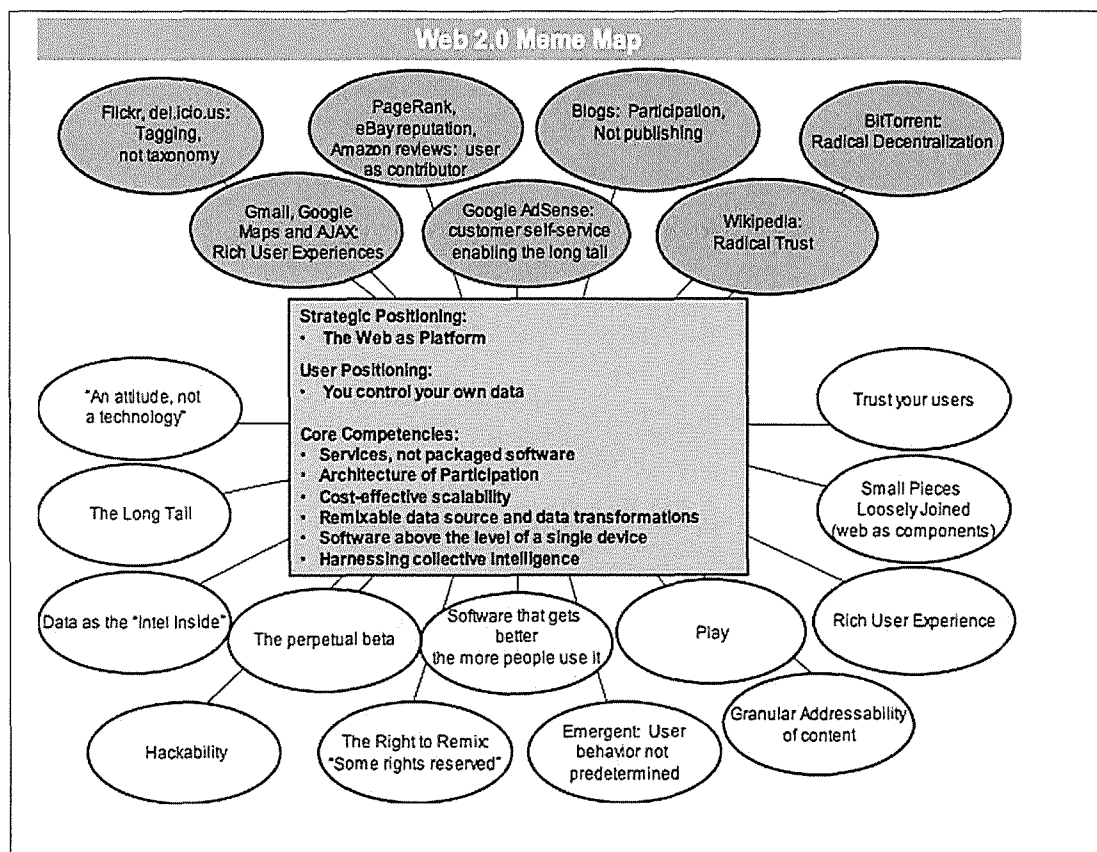


Figure 1: Web 2.0 Meme (Source: O'Reilly, 2005)

A first attempt to describe the basic properties of this web 2.0 ethos dates back in 2005 with the creation of a ‘meme map’ by O’Reilly, showing not only the technologies but also the basic notions that were perceived to ‘radiate from the web 2.0 core’ (O’Reilly, 2005, n.p.). These notions reflect the social, sharing and collaborative nature of web 2.0 along with an emphasis on web properties such as openness, user-generated content and the state of ‘perpetual beta’. There has been considerable debate, however, as to determining what marks the step change denoted by the ‘2.0’ suffix. Beer and Burrows (2007), for example, proposed a number of schematic differences between the two forms of web generation (see table 1). Both the ‘meme map’ and this figure of schematic differences build on the difference between the static and the dynamic state of web 1.0 and 2.0 respectively and the eventual realisation of the content-sharing and collaborative nature of web use that has its seeds in the original web software as conceived by Berner-Lee.

Dimensions of Difference	Web 1.0 (1993-2003)	Web 2.0 (2004-beyond)
Mode...	Read	Write and Contribute
Primary Unit of Content...	Page	Post/record
State...	Static	Dynamic
Viewed through...	Web Browser	Anything
Content created by...	Web Coder	Everyone
Domain of...	Web Designers and Geeks	A new culture of public research

Table 1: Some Schematic Differences between Web 1.0 and Web 2.0 (Source: Beer and Burrows, 2007)

Difficult as it may be to determine what exactly marks the offset of the web 2.0 era, one can certainly identify qualities that distinguish it from the web use of the 1990s. It has been argued that web 1.0 was concerned primarily with broadcasting, accessing and downloading information resources contributed by a smaller number of users - largely based on static webpages and a ‘peer to peer’ network structure. This mode of internet use involved anonymous users browsing mainstream commercial websites, engaging in a two-way exchange of data and digital material or connecting through mailing lists and discussion forums. In contrast, web 2.0 is widely perceived to be constructed on the basis of the ‘three c’s’ notion of collaboration, contribution and community (see Anderson, 2007) and there has been

a noticeable shift from the 'one-to-many' mode of broadcasting content to the 'many-to-many' notion of creating and sharing dynamic user-generated content amongst all users. The metaphors of the 'information superhighway' used to describe the one-to-many internet of the early 1990s or the parallel 'cyberspace' world of the late 1990s that existed alongside the users' normal world are now seen to have been replaced by the notion of the 'hyper-connected network' (Cavanagh, 2007, p.50). The web of the early twenty-first century is portrayed as having entered a new, more social phase where networks and communities are created drawing on the notions of sharing and collaborating. Of course, many of the ostensibly 'new' elements of web 2.0 originate in earlier incarnations of the web and, as such, web 2.0 signifies the realisation of some long-held potentials of the internet. The concept of 'virtual communities', for example, has long been used to describe a worldwide collection of like-minded users' emerging from the 'intersection of humanity and technology' (Rheingold, 1993, p.57). Yet only from the mid-2000s have networks and online communities acquired such a massive dimension and attracted a significant core of online participants.

Web 2.0 is also seen to denote a recent shift from privacy to openness, a concept that accounts for both the 'the rapid development of cross-linked microcontent projects, as well as the quantitative success of web 2.0' (Alexander, 2008, p.153). The notion of openness is seen to constitute a key characteristic of web 2.0 and is associated not only with the public sharing of content of a more personal nature but it also embraces practices such as the use of open source software and the free circulation and re-use of data (Anderson, 2007). Therefore, tools and applications are made freely available for downloading and are then open to further development by other users - embodying the 'right to remix' and 'some rights reserved' principle illustrated in the O'Reilly meme. On one hand, openness adheres to the development model of 'perpetual beta' in which users are treated as co-developers as well as real-time testers and software is continuously refined and improved with new features added regularly (Musser and O'Reilly, 2007). On the other hand, this state of perpetual beta often leads to a range of services bearing the 'beta version' for years (O'Reilly, 2005) and products do not reach a finalised version but are rather 'inherently evolving' (Crook, 2008). The notion of openness adhered to the philosophy of the web 2.0 technologies, however, draws on the pre-existing 'Hacker

Ethic' defined by Levy as early as 1984 as permeating programming culture and the subsequent Open Source culture. Therefore, in many ways Levy's vision of the particularly collective and unfettered 'Hacker Culture' appears to be becoming fully realised alongside the growth of web 2.0 with some of the fundamental principles of hacker ethic such as sharing, openness, decentralization, free access to computers being in the limelight.

A further guiding characteristic of the web 2.0 ethos is that of collecting, publishing and sharing resources and ideas and collaborating online. Notions of sharing, decentralization and democracy are seen to underpin web 2.0 culture and create a ready platform for communities to distribute knowledge and ideas and promote what has been termed a 'we-think' ethos (Leadbeater, 2008a) or a 'participatory culture' (Jenkins, 2006). Such notions of the 'people-powered web' are underpinned by the idea that not only can people easily publish themselves but they can also discover and be discovered by other like-minded people and communicate or engage in debates and convey messages that can reach wider audiences than before. Thus, engagement with social media is seen not only to empower people to contribute to the richness of the web, but also to introduce the notion of a global online audience and promote what is considered as 'rhetoric of democratisation' (Beer and Burrows, 2007).

This idea of democratisation and openness seems to be associated not only with the nature of the technologies and the shift in types of engagement as outlined above but also to the sharing of content and private information - marking a 'shift in the values of privacy' as web 2.0 users appear willing to disclose a range of personal information in their online profiles (Beer and Burrows, 2007, n.p.). As it is often the case, this information can be widely accessed by anyone with an internet connection and users often do not seem to have any reservations with regards to the amount or depth of personal data they post online. This 'mainstreaming of private information' (ibid) has in turn led to range of concerns regarding online and offline safety and data protection as well as discussions on how to teach internet users and particularly children a better understanding of the public/private boundaries of online interfaces.

Another label often attached to web 2.0 is the 'read/write' web, which accounts for its increasing popularity and growing user engagement. Unlike previous

applications, web 2.0 adopts a new approach and allows not only for easy and inexpensive access to information but it also facilitates the creation and publishing of user-generated content through text and media-based social software and social networking sites. This marks a shift from the 'broadcast' form of web 1.0 which only allowed access to and transmission of information from few 'experts' towards a more participatory and active engagement. According to Merchant (2009, p.108) 'web 2.0 applications pre-suppose a more active user who is encouraged to design an online presence (an identity, or even multiple identities) and to participate, to a greater or lesser extent in a community of like-minded users'. In line with the broadcasting opportunities web 2.0 is seen to accommodate, the new tools are also seen as more user-friendly and less technical know-how is required for the production of user-generated content – diminishing thus technical barriers of the past. As Postigo argued (2011, p.182) 'what makes Web 2.0 something categorically different from previous World Wide Web technologies is its ease of use and its ability to coordinate a large volume of knowledge, information, and cultural producers'.

The conditions of web 2.0

If we are to accept the notion of web 2.0 as both distinctive and worthy of academic investigation, then it is important to consider not only the properties of web 2.0 that differentiate it from the preceding forms of internet tools but also the conditions that have facilitated this new technological innovation. To some extent this new form of web activity needs to be viewed 'in the light of media and technology convergence' (Franklin and Van Harmelen, 2007, p. 4) and it has been affected by factors such as the cheaper and faster access to web services and the availability of wireless technologies and mobile internet that have led to new patterns of internet use. As Merchant (2007b, p.123) argues:

As machines become more portable and networking more commonplace, new possibilities arise. Intimately connected with these changes in classroom geography are questions about the nature and direction of communication in contemporary learning environments, particularly as the possibilities for communicating with the world beyond the classroom walls increase.

In contrast to the past, web services have greatly improved while internet access has become both faster and cheaper as the high-speed and relatively inexpensive broadband connection has widely replaced the dial-up connection of the 1990s, leading to expanded web access (Greenhow *et al.*, 2009). As Wheeler (2009, p.3) describes ‘most of the emerging Web 2.0 services are free and relatively easy to use and together constitute the only media that can simultaneously provide the potential for one-to-many and many-to-many synchronous communications’. In addition, the number of broadband users has increased dramatically while public free Wi-Fi access points have proliferated and the use of mobile telephony for internet access has been gaining popularity. It has been argued that these conditions have facilitated ubiquitous connectivity and a new, ‘always on’ pattern of internet use has emerged (Itō *et al.*, 2008; Redecker, 2009). At the same time the computer hardware prices have dropped while their technical characteristics have improved allowing for faster processing as well as greater data storage. These new conditions have resulted in increased internet use and engagement and easier and faster accessing, uploading and downloading of content, resulting to ‘greater fluency of interaction’ (Crook *et al.*, 2008a, p.15).

Alongside the substantial increase in the number of internet users and the average of hours spent online, the web 2.0 era has also marked a shift from the traditional patterns of internet use. Crook notes two particular focal points that have determined recent internet developments, mainly the increasing number of web users and the new patterns of web trading that have emerged. To make it clearer more users and wider online engagement lead to the development of further internet services, whereas the change in trading relations has resulted in reduced commodity prices and more free services (Crook, 2008). The organic growth and massive use of most social software applications can be attributed to their ‘free of charge’ nature while their success largely depends on ‘network effects’ as the more users they attract the more viability they gain (Anderson, 2007). Additionally, within recent years the web browser has transformed into a universal platform that hosts a number of online applications. At the same time, webpages load in seconds and their design has become more versatile and attractive. The shift towards the browser as platform and the potential of online data storage translates into a hassle free, more enjoyable web

experience that in combination with ubiquitous connectivity enhances collaboration and the social participatory nature of web 2.0 (Crook *et al.*, 2008a, p.15).

Furthermore, determinant of the massification of online users has been the shift in the use of the web applications as well as the growth of the available online services. A number of services unavailable in the past such as online banking or public sector services have been gaining popularity, however, what mainly marks the new social and participatory phase the web has entered is the convivial character it has acquired. Web 2.0 has taken the form of an interactive and participatory leisure space and this shift towards online entertainment and communication has shaped the increasing number of users and their rising engagement with social media. It has been argued that web 2.0 technologies have had particularly great appeal to the younger generations of internet users who have massively embraced the new social media. This has enhanced the rising popularity of particular tools and has made social networking sites such as MySpace or Facebook the latest fad in networking and peer communication. Commentators portray a net generation of ‘digital natives’ and ‘i-kids’ (Prensky, 2001; 2008) or ‘net savvy’ youths (Levin and Arafeh, 2002) and ‘e-learners’ (Haythornthwaite and Andrews, 2011) who were born and raised in the digital world and have embraced daily internet use for communication, self-expression as well as informal education – ‘seeing technology as a fun “partner” that they can master, without much effort if they are shown or choose to’ (Prensky, 2011, p. 16).

Conclusion

The massive appeal of web 2.0 and the prevalence of such online technologies can be predicated upon a convergence of new conditions and characteristics such as ubiquitous and faster connectivity, improved and cheaper software and the shift towards the more communicative, creative and convivial nature of the new web era. Nonetheless, there are perhaps reasons for being sceptical towards the assumptions that underline these popular descriptions. For instance, it is important to acknowledge that on a global scale internet engagement remains a minority activity and it is still an overstatement to assume that the ‘always on’ pattern applies to the majority of internet users or that there has been a whole-scale shift towards new

patterns of online engagement. Whilst the web may well have entered a new phase, 'the potentially empowering nature of these changes in media practice is tempered by the limited penetration of these Web 2.0 practices throughout the general populations of different countries around the world' (Selwyn, 2007, p.6). As such, despite the promises of global connectivity through the internet, technology is often seen as very unevenly distributed throughout the world.

Indeed, despite the enthusiasm surrounding the advent of social media, web 2.0 is not always seen as the catalyst for radical transformation. As outlined earlier in this chapter, some commentators remain sceptical, considering 'web 2.0' a buzzword that should not be held in opposition to web 1.0 but is rather a consequence of a more implemented web (Anderson, 2007, p.4). For instance, Tim Berners-Lee, claims that the initial concept of the web was all about connecting people too – viewing web 2.0 as an evolution based on the standards already produced by people working on web 1.0 (Laningham, 2006). The idea of 'using networked computing to connect people in order to boost their knowledge and their ability to learn' (Alexander, 2006, p.33) seems to date further back in time than the 1990s. Its roots stretch back at least three decades to the work of Licklider on networked computers and the "Intergalactic Computer Network" concept back in the 1960s (Licklider, 1963). His vision of connecting computers with user-friendly interfaces so that researchers could draw on each other's work envisages many of the key concepts behind web 2.0, such as collaboration, networking, community as well as creation, participation and sharing.

If we leave the reservations concerning the innovative nature of web 2.0 aside, concerns have also been raised over a range of other issues. For instance, Kelly argued as early as 1994 that there is a risk that at a high level of connectivity, and a high number of members, the dynamics of mobs can take hold. Likewise, Keen (2008, p.9) raised fears that the supposed 'democratisation' of web 2.0 only reflects a situation when 'ignorance meets egoism meets bad taste meets mob rule'. However, we should remain mindful that web 2.0 is still in a phase of on-going developments and, thus, reaching to substantial conclusions or forming a constructive evaluation of its importance or effect constitutes a premature exercise. Whilst more and more people from more walks of life are embracing web 2.0

technologies, it is important to adopt a realistic and objective perspective and dissect how and in what depth these technologies are consumed and the role that web 2.0 plays in transforming the existing social and educational landscape. The next chapter will examine the societal and –in particular- educational claims long made for web 2.0 use and will address the following question – ‘how is web 2.0 use seen to influence how we live and how we learn?’

Chapter 2: Web 2.0 in education: theoretical underpinnings and practical implications

Introduction

As discussed in Chapter 1, the prominence of web 2.0 technologies has been increasing steadily over the last five years in many areas of society. This has particularly been the case within educational communities – with many educational commentators arguing that web 2.0 tools and applications present educators with numerous opportunities and challenges. However, within an educational context, understandings of web 2.0 have perhaps tended to be more vague than those outlined in chapter one. For example, web 2.0 has been accepted within some educational circles mainly as a ‘catch-all term to describe a variety of developments on the web and a perceived shift in the way the web is used’ (Crook and Harrison, 2008, p.9). In this sense, educational descriptions of web 2.0 have tended to concentrate on the evolution from passive consumption of information to more active interaction, creation and sharing with the use of light-weight services that develop rapidly and allow users to make changes to content. In a broader sense educationalists have, therefore, often been content to define web 2.0 in neutral terms. For example, web 2.0 has been perceived by some educationalists as a ‘melting pot’ for user-generated content, sharing and collaboration and new ways of interaction (Franklin and Van Harmelen, 2007).

The use of Information and Communication Technologies (ICTs) to enhance and promote teaching and learning has had a long tradition in educational discourses – with successive waves of technology positioned as a ‘technical fix’ that will solve a wide range of problems and will breathe new life into educational practices (Robins and Webster, 1989). Notwithstanding the affinities of web 2.0 and preceding generations of ICT tools, there are a number of educational characteristics that can be said to distinguish social software tools from their predecessors and allow for reconsiderations as to the new opportunities they create in an educational context. Although ICT enthusiasts claimed throughout the 1980s and 1990s to foresee the reinvention of teaching and learning with the introduction of new technologies, it

can be argued that these tools were mainly deployed to 'deliver' existing forms of education in more efficient ways – therefore, not prompting an exemplary transformation or reinvention of educational processes. For instance, Cuban (1993, n.p.) compared the implementation of micro-computers in schools during the 1980s with the introduction of film and radio in the 1930s and instructional television in the 1950s and 1960s as regards the pattern of 'blue sky promises of the new technology revolutionizing instruction learning'. He argued that although the number of computers per student in schools had increased steadily during the 1980s, the use of computers was an 'expanding' but still 'marginal' activity – suggesting that scenarios of the 'electronic schools' of the future were unlikely to materialise since educational technologists were prone to ignore or underestimate the influence and power of dominant institutional and cultural educational beliefs and practices. Similarly, Lankshear and Knobel (2006, p.55) referred to the tendency of new technologies during the 1980s and 1990s to merely disguise conventional practices without bringing about substantial changes as an 'old wine in new bottles' syndrome where 'school literacy routines have a new technology tacked on here or there' without, however, bringing about any substantial change in traditional practices.

Yet, as the 2010s continue, it is again being argued that the nature of the new web 2.0 tools can be seen to allow for further reconsideration as to the possible use of technology in transforming education. As highlighted in detail in the previous chapter, social media are said to have brought notions such as interaction, creation, sharing, participation and collaboration to the forefront of ICT use in formal and informal educational settings. Although older technologies were also seen to carry such promises, it has been argued that only with the use of web 2.0 tools these promises may actually become materialised in education on a widespread basis – not least because of their great appeal to young technology users. Davies and Merchant (2009, p.3), for instance, highlight the shift towards a more participatory nature of a new educational era in internet use where web-based activity no longer involves mere information access but rather focuses on interaction and user-generated content creation. Social software has not only attracted a significant core of online users, in particular amongst younger generations, but has also coincided with a number of wider infrastructural shifts that make the implementation of these new tools into formal educational settings such as schools less intimidating for teaching staff and

institutions alike. For example, many web 2.0 tools are seen to be user-friendly and free-of-charge – qualities that along with the new conditions in terms of faster and cheaper internet connectivity and reduced hardware prices allow for their larger-scale implementation into school practices than ever before. As argued by McLoughlin and Lee (2008, p.641) ‘in the emerging digital landscape of the Web 2.0 era, where social software tools like blogs, wikis and podcasts provide instant connectivity, promises of engagement and community building, there is a need to rethink models for teaching and learning’.

Thus, the collaborative, interactive and participatory qualities of these new tools have, on one hand, resulted in growing enthusiasm amongst educators as to the potential of implementing them into school practice to support and enhance teaching and learning. Some commentators are predicting the imminent reconfiguration of education provision - foreseeing the era of ‘education 2.0’ (see Rosenfeld, 2007; Yamamoto and Karaman, 2011). On the other hand, however, other commentators remain more sceptical as to the appropriateness of web 2.0 technologies for formal learning. As Selwyn argues (2008b, p.10):

Both “booster” and “doomster” discourses have grown up around web 2.0, portraying its possible educational “effects” and “impacts” in decidedly overstated terms. At one extreme are enthusiastic hopes for a complete transformation of education systems, with some commentators extending the technology terminology of ‘2.0’ through talk of a “re-booting” of teaching and learning. At the other, some commentators have used web 2.0 to generate moral panics about young people and the supposed death of education.

This chapter will now go on to describe these ‘booster’ and ‘doomster’ scenarios as well as other more considered approaches within these two extremes concerning the emergence of web 2.0 technologies within an educational framework. It will commence by considering the most enthusiastic discourses concerning the perceived potential of fully implementing web 2.0 tools into education and thereby redesigning traditional models of teaching and learning. Conversely, consideration will be given to the sceptical conceptualisations of web 2.0 educational opportunities. According to Thomas (2011, p. 1) ‘from Plato to Web 2.0, new technologies have always attracted both passionate advocates as well as an active dissenting tradition’.

Rather than creating a new taxonomy in order to categorise the various discourses on the impact of web 2.0 on education, the chapter will adopt the four broad discourses created by Bigum and Kenway (1998) who use the terms ‘booster’, ‘anti-

schooler', 'doomster' and 'critic' to portray the different perceptions of the use of computer technology in education. Using these established categories allows the chapter to explore whether there has been any shift as regards the range of discourses concerning the use of new technologies in education or whether the views surrounding web 2.0 can be associated with the promises and challenges raised by ICTs more than a decade ago. Having reviewed the polarised claims being made for the transformation of education through web 2.0, the more moderate expectations for changes to educational practice will be examined in relation to a number of predominant educational theories of learning whilst the drivers of the move towards or away from the implementation of social software in education will be explored. Finally, the chapter will consider the emerging empirical evidence for the apparent influence of web 2.0 technologies on educational processes and practices – reviewing what are considered to be the existing examples of good practice as regards the use of web 2.0 tools in school settings, alongside the findings from surveys and case studies of web 2.0 use in schools that have been so far conducted.

Educational promises and fears over web 2.0

The educational promises of web 2.0: the 'booster' discourse

For many educationalists, web 2.0 is seen as promising a significant reconfiguration of education provisions – conforming to what Buckingham (2007, p.32) identifies as a trend in popular discussion towards 'technological boosterism' where claims are made that attribute 'enormous power to technology to equip, to empower and even to liberate young people'. Indeed, Bigum and Kenway (1998, p.378) argued that the most dominant group of commentators within discussions on the need for technology in education are the 'boosters' - defined as 'the unequivocal promoters of new information technologies in education'. Similarly, Selwyn (2011b, p.21) pointed out that 'the vast majority of popular and academic opinion could be said to hold an essentially optimistic view of the life-changing power of digital technology.

Inherent in these discourses is the belief that technology can improve education and solve most if not all the problems that afflict schooling. Driven by a tangible excitement for the new, 'boosters' view the growth and use of computer technology as inevitable – displaying very few doubts about the educational values of their idea

for transformation. As Bigum and Kenway (1998, p.379) contend, ‘booster scenarios tend towards utopian visions of schooling’ and their claims ‘are so entwined with the belief in the self-evident benefits of technological progress that the claims become more like slogans’. As such, these claims tend to focus on optimistic scenarios of how new technologies can be applied within an educational context to solve existing problems and transform schooling.

In line with the ‘booster’ discourse of the 1990s, a number of educational commentators and digital entrepreneurs adhere to the increasingly popular perception that social software has an inherent power to positively reconfigure education and modernise schools. Web 2.0 technologies are, for example, said to ‘spark an even more far-reaching revolution’ than that of the web 1.0 era encompassing the potential to transform the ways education is provided and learning is supported by the creation of a global resource and information ‘platform’ (Brown and Adler, 2008, p. 30 and 18). As such, some educational commentators present web 2.0 as the ‘future of education’ that will overall have greater impact even than ‘the advent of the printing press’ (Hargadon, 2008). This can be seen in the growing use of the 2.0 suffix in educational debates with terms such as ‘education 2.0’, ‘(e)learning 2.0’, ‘school 2.0’, ‘curriculum 2.0’, ‘classroom 2.0’ coming to prominent use – all alluding to the reversioning implications of the ‘2.0’ label outlined in chapter one. In particular, the notion of ‘learning 2.0’ has been defined as ‘a new form of technology-enhanced-learning’ that ‘goes beyond providing free access to traditional course materials and educational tools and creates a participatory architecture for supporting communities of learners’ (Brown and Adler, 2008, p. 28). In all these cases, web 2.0 technologies are seen to herald a step change from the simplistic approach of making educational material available online that was facilitated by the advent of the internet and mark a shift towards a new more collaborative, interactive, creative and participatory ethos in education. As Downes (2005) suggests, the notion and practice of ‘e-learning 2.0’, therefore, marks a sense that online learning ceases to be a medium and is transformed into a platform, where online learning software tools do not simply deliver content for consumption but involve actual student participation and creation.

These booster discourses are especially prominent in emerging guidance to educational practitioners with regards to the learning potential of web 2.0. For example, as Green *et al.* argue (2008, p.9-14) ‘the use of the Web can positively enhance and even transform instruction and affect student learning’ by means of ‘engaging students’ interest and motivation’, ‘developing critical-thinking and information-gathering skills’, supporting cooperative work and being interactive in nature. Also, along these lines, Richardson (2009, p.x) points out that the digital divide continues to grow between the ways young people learn and connect in their everyday life and the ways they engage into educational practices within the classroom. He contends that ‘the Read/Write Web holds transformational changes in store for teachers and students’ (ibid, p.3) and portrays it as a means of transferring information, providing individualised learning and facilitating active participation. However, when looking beyond the assertion that these tools *per se* bear the power to increase skills or enhance schooling, these statements are often seen as overgeneralisations that are not presented in line with findings from empirical research.

A sense of ‘boosterism’ is also evident in the ways that ‘education 2.0’ or ‘learning 2.0’ have been associated with the characteristics of the new digital generation learners – the so-called ‘digital natives’ or ‘iKids’ (Prensky, 2001; 2008) who are seen to have been ‘born digital’ – and make no distinction between their online and offline lives (Palfrey and Gaser, 2008). Prensky attests that the ‘iKid’ generation of students now displays ways of learning that have radically changed over the last decade whilst educators or ‘digital immigrants’ continue to suffer from ‘lack of fluency with modern tools’ that is interpreted as a form of ‘illiteracy’ by their students (Prensky, 2007). As such, formal schooling can benefit greatly from the tech-savvy students’ experiences of self-directed learning as long as educators adopt their teaching methodology to the new circumstances and reconfigure their role in education in order to invent best practices and use the rapidly emerging technology effectively for education (ibid). In line with this discourse of facilitating the new generation of learners Alexander (2008, p.151) also argues that, within the context of US school education, a growing number of teachers are beginning to explore social software and develop new educational practices so as to facilitate the needs of their students, who already ‘live web 2.0 digital lives’. Similarly, Tapscott (2009,

p.9-10) describes how the new tech-savvy generation has a ‘natural affinity for technology’ and ‘an aptitude for all things digital’ forcing a change in education from a teacher-focused model of pedagogy based on instruction to a more student-centred approach based on collaboration.

It would be fair to conclude that a sense of ‘boosterism’ pervades much of the current writing on web 2.0 and education – especially within higher education settings where web 2.0 technologies are said to provide ‘profound potential for inducing change’ by ‘allowing greater student independence and autonomy, greater collaboration and increased pedagogic efficiency’ (Franklin and Harmelen, 2007, p.1). Web 2.0 technologies are, thus, perceived to be going ‘beyond content delivery affording personal publishing, ease of use, interactivity, collaboration, sharing and customisation’ and facilitating the construction of new online learning environments (Sigala, 2007, p.630). Overall, then, the potential benefits of implementing web 2.0 technologies in education are generally seen to relate to the flexible, participatory, collaborative and interactive nature of these new tools that create new educational opportunities such as writing for a global audience, developing digital literacies and skills to accompany students through their lifelong learning and facilitating synchronous student communication and collaboration (Alexander, 2008; Beldarrain, 2006; Godwin-Jones, 2003; Kamel Boulos and Wheelert, 2007).

The educational radicalisms of web 2.0: the ‘anti-schoolers’ discourse

Whilst the ‘booster’ discourse presents digital technologies in general and web 2.0 tools in particular as means of transforming and reconfiguring education within its formal settings and suggest optimistic scenarios for the future, perhaps an even more radical approach towards web 2.0 is presented by ‘an interesting sub-set of the boosters’ who can be characterised as the ‘anti-schoolers’ (Bigum and Kenway, 1998, p.380). The ‘anti-schooler’ discourse is predicated around the ‘demise of schooling’ - presenting formal educational settings as a product of the industrial workplace that has now become past its ‘sell-by date’ in a ‘high technology-based educational future’ (ibid, p.381). What distinguishes this discourse from that of the ‘boosters’ is that the anti-schoolers embrace the diminishment of schools rather than seeking ways to implement new ICTs into traditional settings and forms of

schooling. As Cooley and Johnston described (2000, n.p.) 'with the advent of computers, futurists ... predicted a world of highly individualized, "disintermediated education" in which students would take control of their own learning with the support of electronic learning resources and traditional teachers and classrooms would become obsolete'.

The anti-schooler discourses can be seen as stemming from the views of Ivan Illich (1971, p.1 and 11) who embraced the use of technologies to promote 'learning webs' and criticized the inefficient nature of institutionalized education, arguing that:

Universal education through schooling is not feasible. It would be more feasible if it were attempted by means of alternative institutions built on the style of present schools. Neither new attitudes of teachers toward their pupils nor the proliferation of educational hardware or software (in classroom or bedroom), nor finally the attempt to expand the pedagogue's responsibility until it engulfs his pupils' lifetimes will deliver universal education. The current search for new educational *funnels* must be reversed into the search for their institutional inverse: educational *webs* which heighten the opportunity for each one to transform each moment of his living into one of learning, sharing, and caring...Neither learning nor justice is promoted by schooling because educators insist on packaging instruction with certification.

This deschooling discourse gained credence throughout the 1970s and 1980s with authors such as Reimer (1971, p.150) criticizing the institutional monopoly of education and proposing the disestablishment of the school system and its replacement with 'networks, or directories of educational objects, skill models, learning peers or professional educators'. As Perelman (1993, p.19 and 63) later suggested, 'learning is in and school is out' since with the aid of technology 'hyperlearning' makes 'the infrastructure of "schooling" irrelevant and even obstructive' and, therefore, schools are bound to become obsolete in the future. The notion of replacing traditional methods of schooling with the use of new technology was also evident in Papert's (1993, 1996) vision of future schools. Papert compared traditional, hierarchically-controlled public schools with the Soviet economy in terms of aspiring to ensure equal opportunities for everyone but actually failing to do so. Amongst other suggestions, Papert proposed making traditional schooling a matter of parental preference and encouraging home schooling with the implementation of computerised technologies.

The recent shift towards ‘education 2.0’ and web 2.0 tools has proved a ready vehicle for the continuation of the ‘anti-schooler’ discourse. For instance, Solomon and Shrum (2007) highlight the decreasing importance of schools as physical locations and suggest their possible replacement by online communities of learners. Other commentators propose the parting of schooling and learning and imagine ‘schools’ as looser and more flexible public or private learning spaces:

‘We see the question of where education is headed in terms of the separation of schooling and learning. We’re not predicting the collapse of your local elementary school. Young people will not be forced to retreat behind computer screens to become educated. Rather, we see the seeds of a new education system forming in the rapid growth of new learning alternatives, such as home schooling, learning centres, workplace learning and distance education. These new alternatives will make us rethink the dominant role of public schools in education as children and adults spend more time learning in new venues’ (Collins and Halverson, 2009, p.3-4).

Whereas the above ‘deschooling’ scenarios recommend the use of digital technologies to ‘replace the structures and processes of school altogether’ other commentators propose a digitally driven ‘reschooling’ where technologies will be used to ‘reconstitute the structures and processes of school’ (see Selwyn, 2011b, p.142). For instance, Solomon and Shrum (2007) do not embrace the most radical of the ‘anti-schooler’ assertions but they encompass the implementation of collaboration and communication tools in the classroom and they deem necessary changes in currently used software, textbooks and applications. Their vision of ‘new schools’ predicates the implementation of social software technologies and is largely associated with the development of what are presented as ‘twenty-first’ century skills. In particular, Solomon and Shrum (2007, p. 178-9) envisage a non-institutionalized version of school -possibly virtual- where teachers act as ‘tree guides’ or ‘information gurus at a help desk’ available to assist students in their learning journey. Conversely, students would be equipped with a type of ‘electronic personal education assistant’ developed by software companies that would navigate them towards other activities and knowledge resources according to their personal interests, needs and learning style (ibid).

Likewise, Leadbeater (2008a, p.147) criticises schools for being ‘out of kilter with the world children are growing up in’ and for offering learning ‘cut off from real-world experiences’. Whilst not eschewing the concept of school altogether, Leadbeater does not regard schools as the most important places for learning,

suggesting a radical reformation that would involve the implementation of web 2.0 tools in line with a what is termed a mass-collaborative ‘we-think’ approach in education. In this sense, learning would be made available ‘all over, all the time, in a wide variety of settings’ where students would be given more choice and more freedom, actively participating in the educational process (Leadbeater, 2008a, p.149). In particular, he argues that ‘the School of Everything model’ - described as ‘an online UK-based community that "connects people who can teach with people who want to learn" - should be adapted to ‘work with and form schools so they can create more properly vetted options for pupils to learn skills from members of the community’ (Leadbeater, 2008b, p.63). Although Leadbeater does not propose the abolishment of schools *per se*, he suggests such drastic changes in terms of the schools’ structure, ecology and operation that can be seen as placing him under the anti-schoolers’ discourse umbrella.

The educational fears over web 2.0: the ‘doomsters’ discourse

Although persuasive, the above radically optimistic scenarios of an educational transformation with the use of web 2.0 tools are not unanimously embraced across the education community. At the other extreme from the ‘booster’ and ‘anti-schooler’ discourses stand a number of commentators who refer in decidedly negative terms to the web 2.0 educational era. These commentators talk of web 2.0 tools as degrading schooling and foresee the ‘death’ of education because of the increasing use and popularity of new technologies. As argued by Bigum and Kenway (1998, p.387) ‘if boosters are the blinkered romantics of scenario writing for high technology in education then doomsters are the writers of tragedy’. Broadly conservative in nature, the doomster discourse evolves around fears about the possible ‘harm’ and ‘damage’ caused by new technologies that can lead to the ‘deskilling’ of students in terms of traditional skills and literacies and to the decline of the formal educational system in general.

Indeed, such ‘booster’ and ‘doomster’ scenarios have been advanced since the advent of computers. As Buckingham (2007, p.40) argues ‘fantasies of “Edutopia” have been challenged by some equally fervent condemnation of technology in education’. In contrast to the enthusiastic educationalists that argue over the

potential of social software to enhance or reconfigure traditional schooling, the doomster scenarios that flourish anticipate the demise of education. Andrew Keen (2008, p.143) for example, criticises the recent web 2.0 development for ‘creating a generation of cut-and-paste burglars who view all content on the Internet as common property’ and who are ‘downloading and using this stolen property to cheat their way through school and university’. Keen further argues that social software tools such as Wikipedia ‘are undermining the authority of teachers in the classroom’ while he condemns the new form of the read/write web as responsible for the digital narcissism of younger generations who spend more time ‘self-broadcasting themselves on social networks’ than consuming the work of other esteemed artists (Keen, 2008, p.xiii-xiv).

Similarly, other critics view students’ use of web 2.0 applications and tools as having a detrimental effect on their studies. For instance, Brabazon (2007, p.19) deplores web 2.0 tools as destabilizing authoritative relationships between students and teachers - arguing that ‘2006 will be remembered as a time when the mediocre, banal and self-confident discovered blogs ... and grainy mobile phone footage of the embarrassing, humiliating and voyeuristic gained a new home – YouTube’. Furthermore, Eve and Brabazon (2008, p.55) have argued that ‘the user-generated content “movement”... has provided a channel and venue for the emotive excesses of grievance, hostility and insolence against teachers, students and education’.

Whilst these concerns relate to the social deterioration of educational relationships, other educational commentators have described pessimistic scenarios relating to the harmful results that the increasing use of social software can have on youth’s physical and psychological development. For instance, the prominent neuro-scientist Susan Greenfield criticized children’s’ experiences of social networking sites such as Facebook, Bebo and Twitter – demeaning them as ‘devoid of cohesive narrative and long-term significance’ and warning ‘that the mid-21st century mind might almost be infantilised, characterised by short attention spans, sensationalism, inability to empathise and a shaky sense of identity’ (Greenfield in Wintour, 2009, n.p.). Similarly, although not a doomster herself, Jackie Marsh (2010) described how young children’s engagement with online games and virtual worlds has been associated with numerous ‘doomsday’ scenarios.

A sense of ‘doomsterism’ is also evident in recent commentaries that portray a disengaged generation of young people immersed in the use of new technologies that somehow harm their intellectual development. For example, Bauerlein (2008, p.201) describes current generations of net-savvy youth as the ‘dumbest generation’ characterised by a ‘vigorous, indiscriminate ignorance’. He argues that rather than empowering and enriching knowledge and connectivity with the broader world, the use of new technologies has instead resulted in decreasing young people’s knowledge of social, political and historical issues. Additionally, this ‘dumbest generation’ is said to have become adept at peer-to-peer interaction that focuses on popular culture and allows little or no space for the participation of older non-digital generations. Being critical of the new multitasking mode of learning Bauerlein (2008, p.201), therefore, concludes that:

The 21st century teen, connected and multitasked, autonomous yet peer-mindful makes no great leap forward in human intelligence, global thinking, or netizenship. Young users have learned a thousand new things, no doubt. They upload and download, surf and chat, post and design, but they haven’t learned to analyse a complex text, store facts in their heads, comprehend a foreign policy decision, take lessons from history, or spell correctly. Never having recognised their responsibility to the past, they have opened a fissure in our civic foundation, and it shows in their halting passage into adulthood and citizenship.

The educational challenges of web 2.0: the ‘critics’ discourse

The history of educational technologies often appears to be characterized by ‘a debate between uncritical romantics and dismissive skeptics’ (Thomas, 2011, p. 2) and the advent of web 2.0 seems to have offered even more ground for extreme optimistic or pessimistic scenarios that foresee either the radical and imminent transformation or the demise of the traditional educational settings. However, both positions appear to ‘often exaggerate or downplay the impact of technology, and this leads to entrenched positions and polarization’ (ibid). In this respect one small but vocal group of commentators are seen to be more sceptical as to the potential benefits of new technologies in education challenging the ‘taken-for-granted assumptions’ of the boosters’ discourse (Bigum and Kenway, 1998, p.383) and adopting more moderate views considering the issues that surround the successful (or not) implementation of social software in education.

For these authors at least, the spirit of enthusiasm that currently surrounds much discussions of web 2.0 use in education contrasts with a range of practical

challenges and fears that emerge as regards the possible implications and impact of social software implementation in formal educational settings. Some critics argue that careful consideration should be given to issues of e-safety and privacy when it comes to implementing web 2.0 in formal schooling, especially when bearing in mind the recent shift in many web 2.0 users' values of privacy and disclosure of personal information online (Beer and Burrows, 2007). Although it has been reported that young people seem to have 'a high degree of awareness of safety issues ... [and of] certain rules they have to respect on the Internet' and there is even wide evidence of 'self-regulation' (Mediappro, 2006, p.14), some critical commentators raise concerns over the need to limit the potential of students being at risk when using web 2.0 technologies. Recurring concerns over safety issues are largely seen to focus on the danger of 'falling prey to predatory strangers online and increased bullying by peers' (Crook *et al.*, 2008a, p.22). Additionally, other commentators express concerns over the protection of students' privacy in relation to the public nature of the Internet and the need for teachers to minimize potential risks and embed e-safety in the school's teaching and learning practices (boyd and Ellison, 2007; Walker, 2009; Hasebrink *et al.*, 2008).

Scepticism is also expressed when considering whether the so-called 'digital native' or 'net generation' tag can be applicable to the total student population or whether 'digital divides' and differentiations still exist according to the socio-economic status of the pupils and whether even the 'net-generation' of learners make simplistic, superficial use of the new technologies or manage to engage in more in-depth practices. As Selwyn (2009b, p.76) points out the users and audiences of web 2.0 applications 'remain skewed towards young, male, well-educated, affluent Western users', arguing that 'the most used social web tools are most often appropriated for the one-way passive consumption of content'. Similar concerns as to the relation of the socio-economic status with the access and use of new technologies are highlighted by Notten *et al.* (2009) in their cross-national study of the use of digital technologies by adolescents. As Bennett *et al.* (2008) also argue, evidence from empirical research suggests, that, whilst a large proportion of young people engage with new technologies in a skilful manner, another considerable proportion of young people 'do not have the levels of access or technology skills predicted by proponents of the digital native idea'.

Notwithstanding the scepticism expressed as regards the possible implications and the essential precautions that need to be taken into consideration, these ‘critics’ do not necessarily dismiss the potential of web 2.0 implementation in educational settings but seek ways to make it as unproblematic as possible. For example, Owen *et al.* (2006, p.3) have highlighted the changing patterns of engagement with knowledge, identifying a shift in the current role of education as a means not only of acquiring knowledge but also of developing the skills to cope with societal changes and promoting lifelong learning. Additionally, it has been argued that ‘whilst not intended primarily as educational applications’, web 2.0 tools can be seen as ‘certainly prominent if unauthorised features of the contemporary e-learning landscape’ and as an ‘important element of the digital landscape of many learners which is decidedly outside the control of the education institution’ (Selwyn, 2007, p. 3). Thus, the perception that underlines the critics’ discourse is that ‘web 2.0 social software and its conceptual underpinnings do not indicate a sharp break with the old but, rather, the gradual emergence of a new type of practice that is evolution rather than revolution’ (Kamel Boulos and Wheelert, 2007, p.16).

Educational theories underpinning the implementation of web 2.0 in education

Whilst informing much of the general educational reaction to web 2.0, these booster and doomster discourses are intended to be polemic and often unsubstantiated in nature. In reflecting on the significance of web 2.0 use in schools we should also consider the more specific and carefully argued justifications that have emerged from educational commentators – not least the reason for web 2.0 leading to tangible improvements in the provision of education and learning. Social constructivist theories, influenced by the Vygotskian school of thinking, are often seen adhered to the web 2.0 educational discourses and a large number of academic commentators and educationalists have associated constructivist principles with the collaborative, participatory and creative ethos of the social software tools. Other educational theories underlying web 2.0 implementation are related to the ‘communities of practice’ and networked ‘constructivist’ knowledge-building pedagogies, as well as discourses on democracy, creativity, social justice and informal learning. Although

many of the specific issues covered in these arguments differ, they all provide a justification for the increased use of web 2.0 tools in formal educational settings.

Learning: Social Constructivist and constructionist arguments for web 2.0 use

Long before the advent of social software the use of computing technologies to facilitate educational practices was often viewed in line with social-constructivist theories (Perkins, 1991; Duffy and Jonassen, 1993). Although the roots of social constructivism stretch back to the beginning of the twentieth century, the progression from a teacher-centred, 'chalk and talk' model of teaching to a more student-centred and participatory approach has frequently been linked with the web 2.0 ethos of active participation, collaboration and creation. As argued by Jonassen *et al.* (1995, n.p.), constructivism provides 'a set of guiding principles to help designers and teachers create learner-centred, collaborative environments that support reflective and experiential processes'. In particular, the constructivist mode of 'active' learning is described in terms of facilitating student interaction with and participation in their surrounding environment so as to create 'a personal view of the world' going beyond the mere transmission of information from 'instructors' minds to students' notebooks' (ibid, n.p.). In this sense it is argued that 'constructivist environments engage learners in knowledge construction through collaborative activities that embed learning in a meaningful context and through reflection on what has been learned through conversation with other learners' (Jonassen *et al.*, 1995). Similarly, Du and Wagner (2005) described a collaborative model of constructivism that focuses particularly on sharing and interaction, where learning emerges by constructing shared understanding through collaborative activities.

The parallels between these descriptions on learning and web 2.0 practices are many and constructivism is seen as being 'favoured by most contemporary advocates of educational computing' (Buckingham, 2007, p.32). Enthusiasm for web 2.0 pedagogies has, therefore, often been underpinned by constructivist theories. Indeed, it has been argued that 'the emphasis on community and social networks in web 2.0 has a strong connection to theories of social constructivism', positioning web 2.0-based learning as both an independent and community embedded process with the role of the teacher being reconfigured as that of a 'facilitator' who supports

collaboration and guides learners ‘through their interaction with the learning material’ (Sturm *et al.*, 2009, p.371-373). Additionally, as McLoughlin and Lee reasoned (2008, p.643), in the new digital reality ‘learning to learn’ (‘know-how’) has become far more important than memorization of knowledge (‘know-what’) and there has been an increasing call to adjust pedagogy to these new circumstances.

The association of social software with social constructivism theories has also been highlighted by a number of other commentators (see Seitzinger, 2006; Franklin and van Harmelen, 2007) and can be made across most types of social media tools. For instance, Richardson (2009, p.27 and 57) described weblogs as especially constructivist tools for learning while he considers Wikipedia ‘the poster child for the collaborative construction of knowledge and truth the new, interactive Web facilitates’. Similarly, Du and Wagner (2005, p.11) argued that ‘weblogs enhance the traditional learning log, which facilitates cognitive constructivism, with collaborative elements, which facilitate social constructivism’. What is more, the collaborative nature of wikis is seen to create opportunities for reflective thinking and knowledge building which are notions adhered to the social constructivist pedagogy (Parker and Chao, 2007). Notwithstanding the oversimplified justifications underlying this argument, the wiki is often seen as ‘a powerful tool for constructivist learning environments because it facilitates collaboration’ (Notari, 2006, p.131).

Thus, associating digital technologies with ‘constructivist’ theories of learning has been widely embraced within the educational technology literature. The question, however, remains as to whether these technologies have actually facilitated a shift towards a constructivist mode of classroom practice. Are technologies the sole driver of changing the learning landscape or is the role of school and the educator of equal or greater importance? As Grant (2008, p.5) contended ‘the technological artefact... is only part of the bigger picture. The whole environment in which technology is used makes a difference to how it is used’. Similarly, Scardamalia and Bereiter (2003, p.1372) contended that when students are engaged ‘in tasks and activities in which ideas have no overt presence but are entirely implicit’ and are able to describe these activities but ‘show little awareness of the underlying

principles that these tasks are to convey', the case of 'shallow constructivism' emerges, replacing a deeper constructivist learning experience.

The educational qualities of social software have also been underpinned by the constructionist learning theory that views learning as resulting from the re-construction rather than transmission of knowledge and argues that learning is most effective when it is part of an activity such as constructing a meaningful product (Papert, 1986). Constructionism has been long associated with Seymour Papert and the use of the Logo language to teach mathematics, however, it is seen to have potential application in other educational fields. As argued by Forte and Bruckman (2007, p.32) 'constructionism carries with it an ideology of empowerment and choice' and students learn by being engaged in 'open-ended, unstructured, playful but productive construction activities'. In particular, whilst examining how constructionist learning theories can be applied to the collaborative use of wikis Forte and Bruckman (2007, p.39) reported that 'cultural and institutional factors influenced the adoption of wiki and the collaborative results whilst they also stressed out the importance of providing construction kits that support the writing practices we want to encourage'. Similarly, constructionism is said to tie in with the use of social software 'for the construction of public entities, for example, via a video presentation on a social media system, a blog entry and a set of wiki pages' (Franklin and van Harmelen, 2007, p.20).

Communities: creating online communities of practice and knowledge-building networks

The opportunities for collaboration that digital technologies and in particular web 2.0 tools offer are also seen by some commentators to relate to other socio-cultural theories of learning such as 'communities of practice' and 'knowledge-building networks' theories. The term 'communities of practice' was first introduced by Lave and Wenger (1991), and later used by Wenger (1998, p.13) to refer to the process of collective learning that takes place in socio-cultural contexts - positioning learning as participation that 'takes place through our engagement in actions and interactions, but it embeds this engagement in culture and history'. This notion has subsequently been taken up within the educational technology literature. For instance, Schaffert *et*

al. (2006, p.8) defined technology based learning as a situated process where through participation members of online communities of practice adapt to shared knowledge and practices. In this sense, technologies such as wikis can be perceived 'as a knowledge platform for a community of practice' that allowed members of the community to collaborate and share their knowledge with the group whilst arguing that even Wikipedia can be considered a large community of practice (*ibid.*). Similarly, Swartz *et al.* (2004, n.p.) associated wikis with a number of fundamental properties of Wenger's communities of practice such as 'a virtual presence, a variety of interactions, easy participation, valuable content, connections to a broader subject field, personal and community identity and interaction, democratic participation, and evolution over time'.

Notions of 'knowledge-building communities', developed by Scardamalia and Bereiter (1994), are also often used to justify contemporary technology use. In this sense, Scardamalia and Bereiter (1994, p.265) argued that 'schools need to be restructured as communities in which the construction of knowledge is supported as a collective goal, and the role of educational technology should be to replace classroom discourse patterns with those having more immediate and natural extensions to knowledge-building communities outside school walls'. Such conceptualization of knowledge-building networks sees learning as an intentional collaborative activity where learners are responsible for their own learning goals and seek to achieve them by sharing and participating in the community (Grant, 2009). The knowledge building paradigm is said to take advantage of web 2.0 possibilities as 'it privileges a less hierarchical form of learning based on small teams, sharing, content creation, and the use of ICT to access, create, share and continually improve ideas' (McLoughlin and Lee, 2007, p.668). In particular wiki tools are often associated with knowledge-building networks theories (Parker and Chao, 2007; Forte and Bruckman, 2007; Grant, 2009). Similarly, the opportunities for knowledge building through the use of folksonomies have also been highlighted by Merchant (2007a).

Theories of individual and organisational improvement in education

Whilst there has been an ever-increasing tendency to embrace web 2.0 tools as powerful means of creating knowledge and building collaborative communities, further consideration needs to be given to the extent to which these promises are actually being fulfilled within formal educational settings. In particular, consideration needs to be given to how web 2.0 tools relate to the conditions under which web 2.0-based learning is seen to take place, the perceived possibility of using web 2.0 tools to personalise the learning experience, and the influence of web 2.0 on making education a more inclusive process.

In this first sense, it could be argued that the use of web 2.0 tools and the educational opportunities that emerge are often seen to be underpinned by theories of informal rather than formal learning. This reflects a number of changes to the definition of knowledge and learning that have taken place throughout the last twenty years or so – with a range of activities that do not take place under formal educational settings now often seen as ‘educational’ in nature, even if not in the conventional understanding of the term. Sefton-Green argued (2004, p.6) that the distinction between informal and formal learning can be made ‘around the intentions and structure of the learning experience’, where the former refers to ‘casual’ or ‘disorganised’, ‘accidental’ learning, whilst the latter is set around a set of formalized structures and expectations such as a prescribed curriculum of assessment agenda. Similarly, Buckingham (2007, p.24) suggested that informal learning can take place in a range of in-school and out-of-school settings and it does not necessarily ‘have to involve “formal” definitions, either of content or of the pedagogic relationships between teachers and learners’. In this sense, it is important to acknowledge that informal learning can take place within a formal educational setting – but is less likely to. Regardless of location, web 2.0 technologies are often seen as platforms that can facilitate informal learning, allowing a range of educational activities to take place. As Redecker argued (2009, p.41):

Access to digital technologies enables learners to tailor their informal learning to their own interests, to access information of relevance to them, to communicate with people who can support their learning, and to share ideas and expertise within informal learning communities.

In contrast to the often ‘conservative’, ‘static’ and ‘institutional’ nature of formal education web 2.0-based informal learning communities are said to be more ‘experimental’, ‘innovative’ and ‘provisional’ and ‘can evolve to respond to short-term needs and temporary interests’ (Jenkins *et al.*, 2006, p.9). However, despite these perceived advantages, informal learning is also seen as ‘nebulous and hard to identify’ as it is not easy ‘to prove when and exactly how a child has learnt a skill’ (Green and Hannon, 2007, p.35). Commentators have, therefore, highlighted the importance of bridging the gap between formal and informal learning suggesting that ‘teachers need to exploit a range of tools for communicating with their students and encouraging them to transfer their expertise in informal learning across to the formal sphere (Green and Hannon, 2007, p.59).

In particular, it has been argued that wiki tools can promote self-directed or informal learning within the school setting (Schaffert *et al.*, 2006). Luckin *et al.* (2009) also reported instances of sophisticated web 2.0 engagement that resulted in informal learning amongst UK secondary school students through the use of a variety of applications, including Wikipedia, YouTube, forums, virtual world programs and social-network sites to access or contribute content and resources. Similarly, a large-scale US ethnographic study that documented young people’s everyday engagements with new media in informal peer-based interaction settings, reported that ‘some of the drivers of self-motivated learning come not from institutionalized “authorities” setting standards and providing instruction, but from youth observing and communicating with people engaged in the same interests, and in the same struggles for status and recognition’ (Ito *et al.*, 2008, p.11). Three types of user engagement with web 2.0 tools were reported from the Ito study: ‘hanging out’ which mainly involves maintaining social connections; ‘messing around’ which denotes a shift to more in-depth, ‘trial and error’ exploration of and involvement with the technologies; and, finally, the state of ‘geeking out’ which denotes a more ‘intense, autonomous and interest-driven’ mode of engaging with media and technology (Ito *et al.*, 2008, p.28).

Associated with the apparent tendency for web 2.0 tools to support informal learning, these enthusiasms for the adoption of new digital technologies in formal educational contexts are also often underpinned by theories of creativity, which has

been the focus of various educational policy developments and is often touted by educational commentators as a contemporary skill. As Loveless (2007, p.5) argued, twenty-first century education systems are now compelled to 'adapt to the changes, aspirations and anxieties about the role of creativity in our wider society' with web 2.0 technologies seen as a means to 'provoke teachers' thinking about the media, the organisation, and the knowledge and skills required to support learners' creative activities'. The deployment of digital technologies to promote creativity in the classroom has significantly increased over the last few years and is now often seen as a key pedagogical quality of web 2.0 tools. For instance, Rudd *et al.* (2006b) asserted that web 2.0 technologies foster new forms of digital creativity in the classroom – giving students increased opportunities to create, share and publish content online (see also Walker, 2009; Solomon and Shrum, 2007). However, it is important to highlight two emerging issues to these discussions: first, the notion of web 2.0 based creativity as defined by these authors seems to have been partly reconfigured as it is no longer defined in terms of originality but it is said to be 'a practice of rip, mix and burn, where content is taken, appropriated, adapted, mixed, and distributed in a way in which consumption of media and information also becomes a productive act' (Owen *et al.*, 2006, p. 39). Second, this new form of digital creativity entails the danger of predicating creative interaction and production upon the power of the technologies. It may be necessary to acknowledge, therefore, that web 2.0 tools do not 'guarantee effective engagement or development' but there is a need to 'support and guide children's interactions in informed ways' (Loveless, 2007, p.9).

Aside from these advantages of informality and creativity, web 2.0 tools are also seen by some educational commentators to lead to an increased equity of learning opportunities and outcomes by enhancing the promotion of inclusive practices and increasing social justice in education. Inclusive education is seen as a range of practices that focus on the individual needs of students and also promote an understanding of social equality. It has been argued that web 2.0 use in schools can support inclusive practices not only by motivating and engaging learners but also by allowing personalisation of learning (Walker, 2009). The notion of personalisation involves 'closely tailoring education to learners' needs and aspirations' (Walker, 2009, p.47) with web 2.0 tools seen as an ideal means of ensuring that learners 'are

(re)positioned at the centre of networks of learning opportunities' (Selwyn, 2010, p.93) and of providing 'flexible access to information and resources, and anytime, anywhere opportunities for collaborative learning' (Green *et al.*, 2005, p.20). Relating back to earlier claims, some of the qualities of web 2.0 tools associated with inclusive practices theories are viewed in terms of creating democratized online communities to 'foster a more personalized approach to learning, and improve knowledge-sharing', encouraging 'a wider range of expressive capability' and creating a setting 'for learner achievements to attract an authentic audience' (Walker, 2009, p.3).

For some commentators, then, these qualities extend into enhancing equalities of opportunity and outcome. For example, web 2.0-based learning is often associated with widening access and facilitating new approaches to learning and, thus, 'engaging with people who have not achieved their full potential with more traditional approaches' (Grant, 2008, p.9). Similarly, Light and Luckin (2008, p.27) argued that technology can act as a means of addressing the needs of marginalised groups by enhancing learning and equipping students with the skills and knowledge prerequisite 'to help them articulate their voices'. The notion of allowing space for 'learner voice' associated with theories of democratization or 'learner democracy' is also seen to be consistent with the web 2.0 ethos of openness and democratic engagement. Offering learners opportunities to make their voices heard and listening to their concerns, interests and needs can be facilitated by the 'communicative, collaborative and community-building aspects of social software' (Rudd *et al.*, 2006a, p.26). Similarly, it has been argued that web 2.0 tools such wikis and blogs 'take the democratization of learning even further by allowing everyone to be an editor and thus exemplary learning to emerge' (Sturm *et al.*, 2009, p.378).

Web 2.0 use in practice

The rationales and arguments presented so far have been based on presumption and prediction rather than actual empirical evidence of web 2.0 use in school settings. Alongside the various discourses and theoretical perceptions that either over-emphasise, criticise or dismiss the educational opportunities and risks that emerge with the deployment of web 2.0 technologies in formal educational settings, it is

important to overview the emerging research literature that exists as regards the empirical findings of web 2.0 use in the classroom. Whilst school use of web 2.0 tools has been the focus of a number of educational policy agendas, little relevant academic in-depth research has been conducted to date to highlight the impact and the educational benefits and/or challenges of their actual implementation in schooling. This is to be expected given the necessary 'time-lag' between policy and technology development and the later publication of academic research findings.

The academic literature that does exist on web 2.0 has largely described and suggested ways of implementing social software in the classroom and argued about the potential benefits as regards student motivation and engagement, interactivity and collaboration and educational outcomes (Alexander, 2006 and 2008; Anderson, 2007, Walker, 2008). Similarly, large-scale surveys and studies have focused mainly on issues of school infrastructure and access, rather on why and how web 2.0 applications are used in the classroom and with what educational results. This next section aims to bring together the emerging findings from both survey, interview and observation-based studies on web 2.0 practices in education in order to explore whether the enthusiasm or scepticism towards web 2.0 outlined so far in this chapter reflects the actual web 2.0 use in school settings.

Access to and use of web 2.0 tools in schools: findings from survey research

To date most surveys on ICTs and web 2.0 tools have focused on adolescents' out-of-school access, use and engagement with new technologies. As such, little research has been conducted with regards to web 2.0 in-school use and the educational challenges involved. The increasing engagement of teenagers with social software tools has been highlighted in a number of large-scale surveys that have reported greater use of technologies for looking up information and for social and recreational activities than for educational purposes (Mediappro, 2006, Notten *et al.*, 2009; Ito *et al.*, 2008). The limited creation of content as opposed to the greater consumption of existing online resources was noted in the Mediappro survey (2006), however, Ito *et al.* (2008, p.39) identified a new form of peer-based informal learning where 'participants feel they can both produce and evaluate knowledge and culture'. Another study aiming to identify how today's youth would be likely to

access and interact with digital resources in the future, reported that although the 'Google generation' was apparently at ease with computers, they demonstrated uncritical trust to online resources such as search engines and lacked the critical skills that would allow them to access online information (Rowlands *et al.*, 2008).

More pertinent to the in-school usage of web 2.0 technologies are the findings of a series of studies commissioned by the then British government technology agency Becta. Cranmer *et al.* (2008) explored the use of technology by Key Stage 2 primary pupils and reported that school computer use typically included activities such as writing and drawing, information searching, using databases and playing math and science educational games while school internet use concerned mainly schoolwork related activities such as information and picture retrieval. The report also highlighted that 'creative and collaborative uses of so-called "web 2.0" applications were not prevalent either inside or outside school, with passive consumption rather than active production the dominant mode of engagement' (ibid, p.36).

A corresponding study also commissioned by Becta that involved Key Stage 3 and 4 learners in both national and web 2.0 sample schools reported higher level of access to and greater engagement with web 2.0 technologies and highlighted the differences in use that accrued according to age and gender. The most prominent of user categories amongst the participants were 'readers, gamers, file-sharers, communicators and newscasters' (Luckin *et al.*, 2008). This suggests that although high level of engagement with web 2.0 technologies had been reported, learners did not seem to reach the level of 'producers' and engage in more sophisticated web 2.0 activities, such as producing and publishing their own content for wider consumption. The study also underlined that the educational use of web 2.0 tools largely depended on the availability of these tools in the classroom and the rigidity or flexibility of the secondary school curriculum. Additionally, fears related to e-safety and policy constraints, such as school internet restrictions and firewalls, were reported to often impose barriers for the adoption of web 2.0 practices. The study drew attention to the fact that 'learners spend, on average, more time working on school work on a computer outside school than at school itself' (See table 1, in Luckin *et al.*, 2008, p.64). Interestingly, students from web 2.0 schools were more

active both in their in-school and out-of-school use of web 2.0 tools, however, this difference was relatively small.

	Mean (Hrs/Week)	Std. Deviation
At school: doing work on a computer	2.46	2.432
Out of school: doing school work on computer	3.29	3.536
Out of school: typing/reading your email or instant messages	4.76	5.075
Out of school: Social networking sites	4.13	4.966
Out of school: Games	3.86	4.825
Out of school: General web browsing	3.60	4.106
Out of school: Other computer activities	2.64	4.093

Table 2.1: Estimated average time spent by learners on computer related activities at school and outside of school (Source: Becta, 2008, *Learners' use of Web 2.0 technologies in and out of school in Key Stages 3 and 4*)

In the cases where web 2.0 tools were deployed in the classroom two different approaches emerged: first, implementation of the tools *per se* and second, implementation associated with 'the web 2.0 ethos of establishing and sustaining collaborative learning communities' (Crook and Harrison, 2008, p.19). The most popular tools were reported to be social networking sites, weblogs, wikis, discussion forums and online chat and uploading and downloading material tools whilst the overall impact focused on student motivation and engagement, new opportunities for participating in collaborative learning activities, and new models of enquiry and engagement with new literacies. Overall, the study suggested that many examples of engaging and educationally worthwhile web 2.0 approaches were encountered, however, a range of implications are yet to be overcome. On one hand, web 2.0 practices are seen to challenge traditional school structures and teachers are often cautious in their exploration and adoption of social software in their classroom. On the other hand, barriers relating to access, infrastructure and bandwidth were found to have a significant influence on impeding web 2.0 use (Crook and Harrison, 2008, p.45).

Use of specific web 2.0 tools in schools: findings from the empirical research literature

Alongside these larger-scale research studies are a number of smaller-scale case studies that largely focus on the use of specific web 2.0 tools and offer some understanding and insight as to the educational use of social software. The majority of these studies centre upon tools such as weblogs and wikis, which are seen to

entail 'significant potential as new collaborative, volatile and challenging environments for formal learning' (Hemmi *et al.*, 2009, p.19). A smaller number of studies, nonetheless, explore the educational potential of other applications such as podcasting or social networking sites.

Blogging

Theoretical underpinnings as to the potential of implementing weblogs in the classroom are seen to emphasize their interactivity by allowing comments and links, their user-friendly properties and the potential of engaging students by offering them the opportunity to write for a wider audience (Godwin-Jones, 2003; Knobel and Lankshear, 2006; Glassman and Kang, 2011). It has also been argued that blogs can be used as constructivist tools for learning (Seitzinger, 2006), as a means of archiving schoolwork and providing a historical framework (Richardson, 2009), and also as a means of facilitating interaction and collaboration in online distance learning (Beldarrain, 2006). Still the idea that blogging can facilitate sharing and collaboration can be fairly problematic and is subject to discrepancy. As Pachler and Daly (2009, p.9) point out: 'Is "sharing" just "making available"? Or offering a collaborative experience which changes all parties' perceptions of the content being blogged?' Whether blogs can be transformed to truly 'social' and collaborative platforms can only be answered by looking at the range of available research study findings.

In a small study of US school students Knobel and Lankshear (2006, p.73) explored how students could use weblogs to become effective and powerful writers and examined the 'prospects of expert-like effective blogging "crossing" to school practices'. The power and effectiveness of blogging as a means to engage students in writing was said to be associated with the potential of reaching wider audiences and with the possibility of constructively working online and collaborating with others for the final result. School-based writing was found to typically lack an authentic, tangible audience that would potentially motivate students more, however, Knobel and Lankshear's (2006, p.88) study of blogs used in the classroom revealed a lack of wit and idea development from the side of the authors and lack of comments from the side of the audience – overall a 'why bother' attitude. Additionally, a significant

number of blogs was maintained by teachers as an online space to post study-related material or deadlines for assignments and assessment criteria rather than a collaborative online space where students can participate. Thus, the study highlighted how the implementation of weblogs in the classroom *per se* may result in no educational benefits whatsoever and how it is important to create the necessary conditions that will lead to students' engagement in effective and powerful writing.

Another study examining a K-12/university partnership in which blogs were used for the collaboration of third grade students and pre-service teachers resulted in more positive outcomes i.e. that: i) 'general attitudes toward writing improved', ii) 'the quality of writing samples increased as compared to similar attempts from prior third grade classes as well as compared to previous writing samples within this group', iii) 'students remained motivated throughout the nine-week blogging project, primarily due to the excitement generated by each new comment from a college partner' and iv) the created blog was used to 'successfully build a knowledge community between the third graders and their college partners' (Drexler *et al.*, 2007, p. 157). Likewise, Huffaker (2004 and 2008) observed that weblogs can be an excellent means of promoting verbal and visual literacy through dialogue and storytelling and provide opportunities for collaborative learning as well as for self-expression and creativity. He also raised issues of online safety and made a range of recommendations as to the effective implementation of blogs in the classroom, without, however, supporting his arguments by in-depth research findings but rather emanating from examples of good practice.

Within a higher education context, small-scale research findings suggest that 'capturing breadth and depth of topic coverage, and requiring students to place their work under public scrutiny appears to better prepare them for a comprehensive final exam and overall course performance' (Du and Wagner, 2005, p.8). Furthermore, it has been contended that students viewed blogs as an interactive and communicative tool that could promote quality cooperative learning (Coutinho, 2007). Similarly, in a comparative analysis of seventeen case studies of blog use in higher education undertaken by Salen Salen (2007, p.88) it was reported that 'weblogs in blended learning environments generated and constructed reflective thinking in compliance with a socio-constructivist learning approach' while interaction and collaboration

between the students and the instructors was improved. Nonetheless, problems were also reported in relation to lack of time and technical skills, and the public nature of blogging. Furthermore, Yang (2009) reported that the use of a weblog facilitated the formation of a community of practice for student teachers whilst nearly two thirds of the 43 participants expressed very positive attitudes toward the use of blogs as a platform to reflect their learning and teaching.

Additionally, an earlier study conducted by Raith (2000, p.288-9) explored the use of weblogs versus paper journals in foreign language learning and suggested that students 'were aware of the discourse community connected to weblogs' and they had 'an audience in mind to interact with' whilst students who kept paper journals produced 'mostly summary writing while students who blogged were more engaged in authentic communication'. Alm (2009, p.118) looked at the potential of university foreign language students using blogs in their course, arguing that 'blogs add valuable new dimensions to paper-based learner journals' by offering new avenues for feedback and online links to the target language and, thus, enhancing learners' confidence and language skills.

Wikis

Within the empirical academic literature, wikis have been often heralded as the most collaborative, interactive and participatory of social software tools and pertinent to the implementation of wiki projects for educational purposes are theories on communities of practice and knowledge-building networks as well as collaborative learning and writing. A number of academic commentators have associated the flexible, collaborative and creative nature of wikis with social constructivist pedagogical practices (Bruns and Humphreys, 2005; Ducate *et al.*, 2011; Thomas *et al.*, 2009). In particular, Grant (2009) has highlighted the potential benefits of wiki tools use with regards to equipping students with new, essential life-long learning skills to participate in the global 'knowledge economy'. Wikis are said to provide a 'low-cost but effective communication and collaboration tool' and 'promote the close reading, revision, and tracking of drafts' while they can also facilitate 'writing as a process' and familiarize students with writing for larger audiences (Lamb, 2004, p.44). Because they are organized by content rather than by date of publication,

wikis can be seen as open, online and flexible platforms that can facilitate a range of small or large-scale educational projects and promote collaborative content creation and editing. In addition, wikis are said to 'lend themselves to collaborative activities' (Wang and Beasley 2008, p.80) and offer suitable online environments for geographically dispersed students to 'develop social ties' (Wheeler *et al.*, 2008, p.990; Elgort *et al.* 2008) – supporting 'a variety of learning activities ranging from tightly to loosely coupled collaborations' (Larsson and Alterman 2009, p.372).

As Glassman and Kang argued (2011, p.109) 'wiki technology may fit the promise of Web 2.0 in education more than any other technology. It fosters integrated problem solving, and advanced understanding of the fungible nature of information and cooperation'. Yet, one cannot oversee the emergence of potential implications such as copyright issues and technical difficulties for teachers as to tracking and assessing students' work. However, theoretical discussions and argumentation aside, it is important to gain deeper understanding of teachers' and learners' wiki experiences and evaluate the learning outcomes from the actual research findings. Although research on wiki implementation in higher education exceeds research in the field of secondary education context, this section will bring together findings from both fields in an attempt to gain more insight on the issue of wikis as collaborative learning tools.

Within a higher education context the use of student-created wikis has been adopted to facilitate a range of projects. For example, a wiki-based teaching and assessment environment was introduced for a New Media Technologies module that resulted in the M/Cyclopedia of New Media with the aspiration to resemble a more subject-focused, smaller-scale Wikipedia. As reported by Bruns and Humphreys (2005), although students were quickly familiarized with the technicalities of the wiki tool, their entries resembled academic essays rather than encyclopedic entries, as they were not accustomed with this flexible format of writing. Additionally, a greater challenge was presented to the tutors who faced difficulties in coordinating the large number of students (n=150) that participated in the projects and in sorting out cases of overlapping since there was no method of disambiguating proposed group topics.

Similarly, the use of a wiki was adopted to facilitate a college-level romanticism seminar consisting of eight students who worked collaboratively for the creation of

the Romantic Audience Project – a wiki experiment that aspired to connect Romanticism with technology. Phillipson and Hamilton (2004, n.p.) reported that ‘wiki technology seemed to induce extra writing, posting [and] engagement from students’ who were seen to produce extra unassigned work and engage in peer interactivity while they also formed a unique class identity and a sense of ownership. Despite the small number of participating students, it has been reported that the instructor had some difficulty in tracking down the new posts, organizing the entries and doing the wiki’s ‘housekeeping’.

A different large-scale study involving 56 wikis produced by over 250 students at the Open University in the UK (Thomas *et al.* 2009) reported that the wiki was used more successfully by Computing students for creating content collaboratively because of their greater motivation and prior experience with wikis whilst the Business students viewed the wiki as a ‘novelty’ tool. The present study also suggested that ‘the students’ different backgrounds and experience produced a marked difference in their use of the wiki; however, all made effective use of the wiki to meet the course requirements’ and as such ‘the key factors for a successful wiki-enabled collaborative activity are managing student expectations and motivation’ (ibid, p.311-312). A more recent study focusing on the implementation of three different wiki projects in three university foreign language classes reported that students viewed the wiki ‘as a valid learning tool and found the wiki environment to be enjoyable’ (Ducate *et al.*, 2011, p.515). Additionally, although collaboration took place in most groups there were also students who ‘still had a strong desire to work alone’ (ibid). Conversely, a case study of 24 first year students at an inner city university in the UK, which employed a wiki tools to discuss uses of web 2.0 for studying and business, indicated that ‘many contributions were disappointing’ (Holley and Oliver, 2011, n.p.). In particular, it was reported that ‘students made little use of Web 2.0 technologies outside of social networking with their friends via Facebook. They were more comfortable with tagging, sharing and commenting, than with more complicated kinds of content creation’ (ibid).

Building on the argument that web 2.0 tools can facilitate students’ experience of authentic knowledge by linking up to and immersing in communities of practice, Grant (2009) explored the use of wiki tools in the secondary classroom and reported

that rather than creating a new collaborative community of practice, students tended to import the existing rules that applied in their usual school work – most notably practices of individualised and competitive working. Forte and Bruckman (2006, 2007) also looked at the opportunities emerging from wiki usage in college as well as in secondary education. The first small-scale pilot study focused on freshman-level students in an American college and reported that the students' online interactions and peer review comments influenced the final draft of their essay. Additionally, an interesting finding was that although the public nature of the wiki project was emphasized, students failed to fully grasp it and, therefore, their perception of audience was limited to that of their classmates. The project that followed was Science Online, a wiki where high school students collaboratively created science resources. As reported in the preliminary observations (Forte and Bruckman, 2007, p.38) 'instead of affording easy opportunities to collaboratively construct text, the wiki construction kit seemed to present several barriers to collaboration'. For instance, progress was frequently slowed by edit conflicts and students did not appear confident either in using the tool or in relying to their classmates to complete an entry. Additionally, the teacher found that understanding the patterns of collaboration in order to assess the wiki entries was particularly difficult, while he also expressed concerns about the public nature of the tools and opted for the privacy feature.

Similarly, Lund and Smørðal (2006) explored how a class of Upper Secondary School learners in Norway was engaged in constructing their collective and multiple perception of the USA with the use of a wiki. They reported that learners preferred to create new entries indefinitely at the expense of editing and improving their own or their classmates' contributions and they 'did not immediately embrace any notion of collective ownership or epistemology but continued a practice where the institutionally cultivated individual ownership persisted' (ibid, p.41). Conversely, a second wiki project carried out by the same class of Norwegian students was given 'a more genuinely collective task' and this resulted in greater collaboration and negotiation amongst learners while writing the contributions (ibid, p.44). Although these three case studies were small-scale and do not allow for generalisable conclusions, students' response towards the use of wikis was overall positive. However, what both commentators emphasize is that the perceived qualities of a

tool alone do not necessarily suggest the creation of successful collaborative learning or result in the creation of communities of practice. Students are said to import traditional school patterns of individual knowledge construction into the use of new technologies, thus changes in teacher and classroom practices are deemed necessary in order to reach the desirable collaborative outcomes.

Social Networking Sites

The popularity of social networking sites within informal contexts has led educators to explore their potential for teaching and learning. They are often seen as 'leading a web 2.0 inspire transformation of education provision and student learning' by offering 'new democratic and collaborative models of educational practice' and enabling the learner to become 'an active participant in rather than passive recipient of learning experiences' (Facer and Selwyn, 2010, p.33-34). As Merchant argues (2012, p.15):

SNSs clearly do provide opportunities for geographically and temporally dispersed groups and individuals to communicate, exchange information and develop ideas, and from this perspective, we may be able to glimpse some new ways of structuring learning communities.

On one hand, engagement with social networking sites such as Bebo and Facebook appears to be one of the most popular activities as regards young people's out-of-school use of ICTs. A recent UK research study described a continuing increase in social networking activity, particularly amongst younger age-groups and reported that when looking specifically at 10-12 year old internet users, 47% have a SNS profile which signalled a rise from 35% in 2009 (Ofcom, 2011). On the other hand, the implementation of social networking tools in educational contexts has been reported as being very low and research in this field is rather limited. The difficulty to implement social networking tools in the context of formal education is associated with curriculum and assessment regimes, institutional policies, teacher unfamiliarity and lack of confidence, lack of example of good practice as well as other obstacles such as e-safety concerns and the restrictive filtering (Luckin *et al.*, 2008; Merchant, 2012).

Nonetheless, there have been a few cases of research on social networking sites that will be presented here. First, findings from a qualitative study that explored uses and

perceptions of MySpace among high school teenagers from low-income families in the USA revealed that ‘SNSs used outside of school allowed students to formulate and explore various dimensions of their identity and demonstrate twenty-first century skills; however, students did not perceive a connection between their online activities and learning in classrooms’ (Greenhow and Robelia, 2009, p. 119). Within an educational context, McCarty (2009, p.181) proposes the use of social networking as a web 2.0 educational tool on the premise that it is ‘authentic, collaborative, and immersive in cutting through power hierarchies and positively blurring the distinction between the classroom and the real life of students and teachers’.

Similarly, Halvorsen (2009, p.238) contends that social networking sites offer opportunities for meaningful interaction and have the potential of becoming a powerful platform for second language learners. His small-scale exploratory study on the use of MySpace by higher education Japanese students inside and outside the classroom reported benefits for mixed ability students. This was not only because the multi-modal nature of the SNS allowed flexibility but also because students gained deeper insight into the personalities of their fellow students, otherwise not possible in a traditional classroom. Further findings highlighted greater peer support and collaboration both face-to-face and online and some degree of critical reflection while issues of varying levels of computer literacy skills and language difficulties did emerge. Conversely, Facer and Selwyn (2010) highlight in their review of research literature on SNSs that on one hand the call to appropriate social networking sites within formal education does not appear to originate from the students and on the other the claims with regards to radical transformations in informal learning are harder to sustain.

Podcasting

Podcasts are seen as web 2.0 tools with particular educational application, especially in terms of creative and communicative learning (Alexander, 2008; Anderson, 2007, Solomon and Shrum, 2007, Kennedy *et al.*, 2008). As Deal (2007, p.4) points out, podcasting is a fairly new ‘endeavor’, therefore, ‘there are relatively few formal evaluations of its educational value’ and ‘most papers to date are optimistically

speculative about the potential impact of podcasting on the quality of educational outcomes and experience’.

The educational potential of podcasting is said to be varied and, in a basic sense, podcasting has been welcomed as a broadcast technology. Richardson (2009) argues that podcasting can be seen, first, as an inexpensive means of radio broadcasting or edu-radio for schools that cannot afford the cost of a radio station and, second, as a means for teachers and students to be creative by recording and publishing daily lessons or other educational activities. Podcasting is said not only to solve practical problems (e.g. accessing missed lessons) but can also be seen to trigger motivation by publishing students’ work online. For instance, the Education Podcast Network hosts a range of podcasts largely created by K-12 educators, who are experimenting with the implementation of podcasting in their classroom and share their resources with other like-minded colleagues. As contended by Cruz and Carvalho (2007, p.313) ‘podcasting is a powerful web tool that allows communication and distribution of educational content’ as it facilitates e-learning and allows sharing audio format content online. Similarly, Molina (2006, p.122) argued that ‘podcasting has revolutionized education, particularly higher education, by making up-to-date content available immediately to large audiences via download or subscription-notification system’, whilst Harris and Park (2008, p.548) highlighted the flexible nature of podcasting in allowing the downloading of content to other mobile devices and providing ‘anytime, anywhere’ access.

Findings from the 2008 Becta research study highlighted that podcasting although used ‘sporadically’ and ‘experimentally’ was along with blogs, wikis and conversational arenas the most prevalent social software tool in web 2.0 sample schools (Crook *et al.*, 2008b). Other authors have concentrated on the educational benefits of creating podcasts, as opposed to consuming them. A small-scale study carried out in a secondary school History class reported that the majority of the students found the creation of a podcast a challenging activity whilst more than half considered creating a podcast as a fairly easy pursuit that had increased their general interest in History (Cruz and Carvalho, 2007).

It should be acknowledged that podcasting is more popular within higher education context and it is seen as a means of enhancing and supplementing courses by

providing flexible access to content, facilitating interaction and distance learning, broadcasting news and information. In this sense it can be used as a marketing tool to attract more students, thus making the use of podcasting 'teaching-, service-, marketing- and technology-driven' (Harris and Park, 2008, p.550). From the scope of foreign language learning, it has been argued that podcasting can add an extra dimension to students' immersion in foreign language context, particularly as regards English (Zychla, 2007; Lu, 2009) whilst the importance of self-study podcasts to improve communicative foreign language skills has also being highlighted by Hegelheimer and O'Brian (2009).

The educational potential of podcasting notwithstanding, a range of other issues have been highlighted by academic commentators such as technical difficulties in the creation and use of podcasting by less experienced teachers and students, permissions to use content, and also adequate equipment, broadband speed and file server hard drive space (Flanagan and Calandra, 2005). In addition, the results of recent studies amongst the university student population have reported that not all students are ready or eager to embrace podcasting for educational purposes (see Vogt *et al.*, 2010; Walls *et al.*, 2010). Findings from other studies illustrate that some users expressed stronger preference for face-to-face tutoring (Kazlauskas and Robinson, 2012) and traditional study spaces (Sutton-Brady *et al.*, 2009) over the 'mobile' potential of podcasts. In another study, the students commented on issues of learning diversity describing how 'podcasts support the learning of audio learners, but may not be preferred by individuals who prefer the visual reinforcement of text-based materials and a large majority of students associated listening with recreation with many citing a preference for text-based study material' (Vatovek and Balser, 2009, n.p.).

Conclusion

As Larry Cuban (1986) observed over twenty years ago, the advent of each new technology in education is largely accompanied by a wave of enthusiasm as to the potential application for teaching and student learning. This enthusiasm, however, is seldom reinforced by robust research that provides evidence of the means to effectively implement these new tools, or else highlights the practical challenges and

issues that emerge from their actual application. As Facer and Selwyn (2010) argued there has been growing frustration that there has been little solid evidence from research findings to support many of the claims and counter-claims currently surrounding web 2.0 technology. As this chapter has shown, the current discussions surrounding web 2.0 use in schools of 'booster' or 'doomster' scenarios do not provide a sufficient or adequate framework for the effective educational use of these technologies in schools on a widespread or sustained basis. There is now a pressing need for large-scale research that will reveal whether and how web 2.0 applications 'work' in the classroom and what are the outcomes for both teachers and students. As Luckin *et al.* (2008, p.43) argue there is a strong imperative for educational research that seeks to 'identify ways in which these uses of Web 2.0 technologies by young people have the potential to transform or add value in formal learning contexts'.

The beneficial outcomes of implementing web 2.0 practices to reconfigure education cannot merely rely on presumed educational capabilities of the tools. Instead, in order to materialize the educational potential of web 2.0 into something more than aspirations a range of other parameters need to be considered. As argued by Selwyn *et al.* (2008, p.26):

educational technologists need to consider how web 2.0 can be shaped and designed along educational lines, and how education can be re-imagined in the light of new technologies. Learners require web 2.0 technologies that are fit for purpose alongside pedagogies and practices that are too. Only then can the undoubted educational potentials of web 2.0 be fully realised.

In drawing together these observations this chapter has articulated a framework of perceived benefits that can be used to inform this thesis's subsequent study of web 2.0 use in school collaboration activities. In particular, the following issues have been identified as worthy of empirical investigation:

- i) The notion that web 2.0 tools can lead to increased online student interaction, participation and collaboration as well as creation and sharing of content.
- ii) The notion that web 2.0 technologies can transform learning and equip students with 21st century lifelong learning skills.

- iii) The assumption that web 2.0 tools and applications bear promises of instant connectivity and community building within and across the school classrooms.
- iv) The practical issues and technical implications that emerge with the implementation of social software in formal educational setting.

These issues, then, will be brought forward into investigating of the specific area of education that the reminder of this thesis shall be concerned with – i.e. school collaboration.

Chapter 3: The nature and form of school collaboration

Introduction

As outlined in the introductory chapter, the specific focus of this thesis is to investigate the implementation of web 2.0 technologies in order to facilitate collaboration and communication between schools – a topic which will be examined within the framework of the EU eTwinning initiative. While the focus of the present study is ostensibly ‘high-tech’ it is important to recognise that current efforts towards the (e)twinning of schools follow on from a long history of school collaboration projects across the past fifty years. As shall be acknowledged in this chapter, school collaboration has been adopted at a range of levels and in a number of forms, and has been embraced by schools and governments alike for a number of objectives. The aim is, therefore, to explore the various existing models of school partnerships and collaborations in primary and secondary education. In doing so, the chapter will attempt to identify the various types of school twinning programmes and highlight the key issues arising from academic evaluation and research findings. In this way, this chapter aims to contextualise the study of the eTwinning programme within the wider historical perspective that will be presented below.

The concept of ‘twinning’ between communities has a long history. In particular, the end of the Second World War saw the rise of the concept of ‘town twinning’ whereby civic and cultural bodies in towns and cities throughout Europe were paired in acts of peace and reconciliation aiming at enhancing communication and fostering cultural links between the twinned towns. As such, town twinning can be seen as ‘the first activity to involve municipal institutions as such in wide-ranging and long-term international action’ and as a means of promoting ‘universal mutual understanding’ and ensuring ‘an eventual European political union’ (Vion, 2002, p.623). Within these civic and cultural efforts, collaboration between schools and other educational institutions was quickly established as an especially appropriate means of breaking down pre-existing stereotypes and prejudices and bridging the cultural gap between nations. For example, UNESCO’s Associated Schools Project Network (ASPnet), founded in 1953 in the aftermath of Second World War, was one

of the first and longest-running collaborative initiatives with the vision of promoting international cooperation and peace through educational exchange (Schweisfurth, 2005).

Alongside these political efforts, there has also been 'a long, if varied' (Kerr *et al.*, 2003, p.2) tradition in the UK as well as in America and other English-speaking countries of establishing networked communities of educational institutions and promoting school partnerships in order to share knowledge, skills and good practice (Atkinson *et al.*, 2007; Hanford *et al.*, 1997). As such, categorising the full range of school collaborative programmes that has emerged in the past sixty years and identifying collectively accepted types is not an easy task. Whilst contradicting the intentions of this thesis, some authors have gone so far as to argue that collaboration is so 'complex and varied in nature' that it 'largely resists study' and categorisation proves to be almost impossible (Hanford *et al.*, 1997, p.40-41). Although collaborative practices have gained recognition as 'an essential ingredient of successful schools', it has been argued that school collaboration still 'remains an erratic and elusive enterprise that is fraught with uncertainty' (Leonard and Leonard, 2001, p.383). Indeed the body of academic literature and research on collaboration appears to be rather poor compared to the abundance of the on-going twinning and linking projects actually taking place. As Atkinson *et al.* (2007, p.xii) observed, most conducted research to date has mainly focused on 'evaluations of particular initiatives rather than the processes involved in inter-school collaboration *per se*'. Additionally, as it has been highlighted by Kerr *et al.* (2003, p.9) previous academic work in the area appears to be fragmented:

The research and evaluation base is very fragmented and there is a diversity of opinion... Much of the evidence available is dependent on the beliefs of researchers and interested parties and the approaches and interests they represent. The literature is sparse and contradictory about the benefits, key lessons and challenges arising from building and how best to sustain professional learning communities. There is a lack of research that captures the messy and complex nature of network processes.

Defining School Collaboration

However, whilst some previous commentators have been quick to highlight the difficulty of defining school collaboration, it would seem necessary, if this thesis is to successfully go on to investigate the implementation of the eTwinning initiative,

to attempt to develop at least a working definition and theoretical conceptualisation of this area of educational practice. In a broad sense, thus, collaboration can be said to 'encompass much more than relationships. It is an intensive interaction that engages educators in opening up their beliefs and practices to investigation and debate' (Katz *et al.*, 2008, p.18). Other commentators have described collaboration as the purposeful 'process of shared creation and shared discovery' that usually 'takes place in the context [...] problem solving that involves some aspects of creation and discovery' and 'requires the meaningful participation of all those involved' (Collis and Heeren, 1993, p.36-37). Similarly, collaboration has also been defined as 'the mutual engagement of participants in a coordinated effort to solve the problem together' in contrast to cooperative work which 'is accomplished by the division of labour among participants, as an activity where each person is responsible for a portion of the problem solving' (Roschelle and Teasley, 1995, p.70). This definition of collaborative as opposed to co-operative practices will be adopted for the remaining of the present study.

Read as a whole, the existing literature on collaboration brings to light the range of existing definitions and the lack of a collectively accepted typology as regards the type of available collaborative initiatives. Thus, varied terms appear to have been employed in educational literature in order to describe the notion of collaboration and the working relationships between schools. Within educational research, various practices are described as 'collaboration', which emerges as a term that can be (mis)applied to a plethora of activities (Shinners, 2001). Building on the review of literature by Atkinson *et al.* (2007), frequently used terms associated with collaboration include: school partnerships; twinning; co-operation; networks; linking; telecollaboration; clustering; collegiates; confederations; consortia; federations; and school 'families' (Atkinson *et al.*, 2007, p.8-9). Yet, although these different terms can be placed under the umbrella of 'collaboration' the rationale and the specific aims they serve can differ extensively from one initiative to the other.

While 'consensual agreement on the precise nature of collaborative practice' may be lacking (Leonard and Leonard, 2001, p.389) and despite the large number of labels and terms adopted, careful examination of the various resources and initiatives that promote and facilitate partnerships and collaboration amongst schools allows us to identify some common characteristics and norms that can be used to inform the

creation of a descriptive typology for the purposes of this thesis. Few previous authors have, however, attempted to produce descriptive frameworks that encompass collaborative initiatives at an international level. One of the few was Atkinson *et al.* (2007) who developed a typology of UK-based inter-school collaborations by categorising the specific aims and underlying rationales of collaborative projects, albeit noting that due to the 'limited numbers of sources involved, emerging patterns only can be highlighted' (ibid, p. p.31). The five suggested models were:

- expertise-based collaborations with the aim being that the school with specific expertise would pass this on to the other school (e.g. Specialist Schools, Beacon Schools, Diversity Pathfinders);
- cultural-based collaborations where the focus was on breaking down barriers associated with different cultures (e.g. independent-state school partnerships; inter-faith and multi-cultural collaborations; international twinning);
- geographically-based collaborations that linked schools within a particular area in order to serve particular needs or save on budget (e.g. federations, collegiates and school clusters);
- commonality-based collaborations that linked schools with similar characteristics with the aim to address common problems or challenges (e.g. small rural primary school clusters/consortia), and
- creativity/innovation-based collaborations with the focus being on innovation and developing new practices.

Thorough as this typology may be, it could be criticised for its rigidity and failure to fully capture the often flexible nature of collaboration. It is more than often the case that collaborations are formed to serve multiple aims and bring about combined benefits; for example, breaking down cultural barriers, sharing good practice, promoting creativity whilst also offering a means of making financial savings. Therefore, this chapter will endeavour to develop a conceptual typology of collaboration based on the level of school collaboration, ranging from intra-national to international level. At the same time a range of other parameters such as the nature and extent of the collaborations, their organisational structure and the (online) tools they employ are also to be explored (see figure 3.1).

School collaboration initiatives and their aims	
Types:	<ul style="list-style-type: none"> • collaboration • partnerships • twinning • co-operation • networks • linking • telecollaboration • clusters • collegiate • confederations • consortia • federations • school 'families'
Levels:	<ul style="list-style-type: none"> • Intra-national • International
Driven by:	<ul style="list-style-type: none"> • State initiatives programmes • NGO initiatives • Commercial
Stated aims:	<ul style="list-style-type: none"> • Improve literacy and ICT skills • Enrich the curriculum • Promote citizenship and cultural awareness • Support schools in under-developed areas • Reduce religious conflict • Tackle sustainability issues • Counter stereotypes and racism

Table 3.1: Types, levels, models and aims of school collaboration

Towards a model of school collaboration

The first criterion that is to be taken into consideration for the categorisation of collaborative programmes involves the geographical distance and boundaries that divide schools. Intra-national collaboration can be said to arise as a common model of linking schools that may be located within the same country but whose characteristics may vary in terms of rurality, religion, pupil need or model of funding (i.e. distinction from urban to rural, denominational and non-denominational, special needs to mainstream, public to private sector). What is more, a broader model of collaboration involves initiatives organised at international level that seek to surpass geographical borders and promote intercultural dialogue between schools that are spread across the world. International collaboration may encompass various models and approaches and can range from collaborative projects restricted within the European Union to initiatives that support linking at a global level. For instance, both intra-national and international co-operations are affected by parameters such as:

- the depth and length of the collaborative relationship;

- the organisational structures or rules that have to be adopted so as to be in line with the agency or body that promotes the particular type of collaboration;
- the tools and resources used to promote and facilitate collaboration between students and teachers;
- the funding opportunities or the fees that may apply;
- the aims and objectives of the collaboration;
- the level of flexibility allowed and the support provided by national bodies and local authorities.

However, given the specific focus of this thesis on the EU eTwinning initiative, it is necessary to distinguish between the issues arising from intra-national and international school collaboration and separately review the academic literature on each topic.

Issues related to intra-national collaborations

The notion of intra-national collaboration most commonly entails school federations, collegiates and partnerships within a country, often emerging from local or state initiatives that aim at sustainability and school improvement, without, however, excluding other types of school linking. As noted by Rutherford and Jackson (2006, p.437) government reports in the UK throughout the 2000s described collaboration between UK schools as a ‘key strategy in raising standards’. Moreover, since the mid 1990s participation in ‘school networks’ has been gaining in popularity and ‘many educational systems have experimented with networking and collaborative approaches to improvement’ (Muijs *et al.*, 2011, p.1). In this sense, school networks are comprised of educators and principals from a range of schools that seek to share good practice, improve professional interaction and help to ‘identify, analyse and solve pertinent problems impacting teaching and learning’ (O’Hair and Veugelers, 2005, p.2). Additionally, within a UK context, as Chapman *et al.* (2010, p.54) noted, ‘the 2002 Education Act in England made it possible for governing bodies to change their organisation’s structural configurations to support school-to-school collaboration in order to support efforts to raise attainment, promote inclusion, and stimulate innovation beyond what had been possible in the past’.

For instance, Jones (2006) identified the employment of various forms of collaboration such as clustering, federating and forming networked learning communities as an alternative means of preventing closure of small schools. Similarly, the establishment of rural consortia amongst small schools in order to overcome 'challenging circumstances' was also highlighted by Atkinson *et al.* (2007, p.32). Another UK initiative that was seen to have had great appeal and attracted a large number of participating schools was the 'networked learning communities' programme, which was introduced in 2002 and ran for four subsequent years. The programme was launched with the aim to encourage school collaboration, 'enhance the quality of professional learning' (Kerr *et al.*, 2003, p.2) and 'respond to a rapidly changing educational environment' (Hill, 2004, p.7).

Another type of collaboration was the case of the 'collegiate academies' - a term used to describe a group of schools that worked together with a view to improve both teaching and learning, enrich the curriculum, provide support to the weakest schools and create a 'corporate identity' (Rutherford and Jackson, 2006, p.440; Arnold, 2006). The evaluation of three Collegiate Academies in Birmingham highlighted that 'the collegiates [were] providing...a dynamic for school improvement that is likely to be much more successful than that of one school working on its own (Rutherford and Jackson, 2006, p.448). The 'Diversity Pathfinders' project was another type of school collaboration set up in 2001 by six local education authorities and the Department for Education and Skills so as to encourage groups of secondary schools to celebrate their diversity by playing to their curriculum strengths and sharing the benefits with other schools' (Atkinson *et al.*, 2007, p.105).

Similarly, moves to establish 'federations' of schools were defined as 'collaborative networks of schools enjoying legal status and some additional funding from the government' (Muijs, 2008, p.64). Under the 'federations' programme, groups of schools were encouraged to work together in order to 'raise standards, promote inclusion, find new ways of approaching teaching and learning and build capacity between schools in a coherent manner' (Chapman *et al.*, 2009, p.2). The direct benefits of a federated approach are seen to involve 'gaining economies of scale from single rather than multiple maintenance contracts for buildings and grounds, ICT equipment and support, school catering and caretaking' (DfES, nd, p.5). In

addition, federations are seen to offer the opportunity to involve not only schools but also build links with other partners within the local community such as colleges, agencies and 'work-based providers' (Rutherford and Jackson, 2006; Arnold, 2006, p.3).

The projects and initiatives described above can be seen as types of school collaboration that were mainly state-driven and, although their aim was to promote the sharing of good practice, expertise and resources and create richer educational opportunities for students, they did not involve true student collaboration *per se*. Consortia, federations and collegiate academies appeared to be mainly local authority or state-driven initiatives that built on the notion of collaboration. Such initiatives were often used as a means of addressing organisational and managerial issues of sustainability or ensuring school survival rather than creating links amongst the student population.

Rutherford and Jackson (2006, p.440), for instance, noted that by creating 'Collegiate Academies', it became possible to bring students together and establish 'viable teaching groups for less popular subjects'. Notwithstanding the educational benefits of this type of partnership, it is clear that the focus was not on collaboration *per se* but on making ends meet or cutting down on expenses. This was exemplified in the case of small primary schools in rural Wales where the federation of schools under one head teacher was reported to be a means of addressing financial difficulties and avoiding merger or school closures (Atkinson *et al.*, 2007, Williams and Thorpe, 1998). Lindsay *et al.* (2007, p.72) in their study of ten out of thirty-seven federation projects that took place between 2003-2007 noted that 'federations had a variety of goals but almost all sought to improve standards and half sought to improve inclusion as their main goal(s)'.

A different type of intra-national collaboration driven less by factors such as sustainability and sharing of resources has been independent and maintained school partnerships. Research carried out by Smith *et al.* (2003) sought to explore the status of collaboration between schools in the independent and maintained sectors where the main aim was to break down barriers and enable schools to become involved in joint work in order to share expertise, raise educational standards and create further teaching and learning opportunities (Ofsted, 2005). Smaller-scale research in the

field indicated that 'schools were approaching partnerships with a great deal of enthusiasm and commitment' and collaboration had succeeded in breaking down barriers (Turner, 2004). A wider scale survey that investigated independent and maintained school partnerships in the UK, highlighted cases when schools collaborated not only in terms of sharing facilities, but also in undertaking 'joint projects related to curriculum and enrichment activities' and the benefits were seen to include 'increased communication', 'improvement in pupil achievement' and 'dissemination of good practice' (Smith *et al.*, 2003, p.10). A different study that included forty-seven secondary schools in twenty-five provinces in China aimed at bridging the gap between rural and urban schools and reported that teachers and students were not familiar with collaborative learning, therefore, 'sufficient and appropriate scaffold strategies for both teachers and students' were a prerequisite for a successful online collaborative experience (Feng *et al.*, 2008, p.28).

The attempt to tackle sectarian divides in various parts of the UK (most notably Northern Ireland and Scotland) gave rise to another model of collaboration between denominational and non-denominational schools with the aim to promote mutual understanding with respect to religious differences. For example, twinning between denominational and non-denominational schools in Scotland aimed to 'enrich the experiences of their pupils and give them an opportunity to meet together' (Scottish Executive, 2006, p.8). 'Creative Partnerships' was another state-driven collaborative learning programme that operated on a regional basis throughout England seeking to promote long-term partnerships between schools and professionals from various disciplines in order to enable students to experiment with new ideas and develop creative skills as well as encourage teachers to be more creative in the classroom. The key findings of the Ofsted report (2006) highlighted that students improved their 'ability to improvise, take risks and collaborate with others' whilst teachers were able to gain a 'deeper understanding about teaching that promoted pupils' creativity and creative teaching by learning alongside pupils. Furthermore, the 'National Gateway' constituted a further example of a UK government-led initiative designed to promote school collaboration across England. Its aim was to encourage schools (particularly the ones serving a predominantly monocultural population) to form links and create 'opportunities for interaction between children and young people from different backgrounds'. The objective behind the 'National Gateway'

was, therefore, to ultimately break down prejudice and foster 'cohesion across different cultures, ethnic, religious or nonreligious and socio-economic groups' (DCSF, 2007, p.5-6).

Although the number of intra-national initiatives in the UK appears to have proliferated in recent years, the impetus for school collaboration is not exclusively a British phenomenon, but examples of school collaboration, can be found both inside and outside of Europe. For instance, the 'Senior Secondary Education School Network', established in 1998, was described as a policy-focused Dutch initiative that sought to promote changes in the educational system, facilitate the sharing of good practice and support communication (Veugelers and Zijlstra, 2002; 2005). Additionally, as Katz *et al.* noted (2008, p.114) in the USA there has been a growth of 'organic' school networks on a national level, even if there has been no 'formal government-sponsored infrastructure'. Examples of other intra-national networks focused on school improvement include the 'Australian National Schools Network', the practitioner-driven 'League of Professional Schools' and the 'Coalition of Essential Schools' in the US. Within a Canadian context, Rees and Woodward (1998) presented the case of 'twinning schools in Ontario' and reported that although school twinning was a decision imposed by the central administration for economic reasons, school principals did identify certain advantages in connection with cost savings, prevention of closure, linking communities and greater resources and opportunities for participation in events and activities. Another case of school collaboration in Canada was the 'Network of Performance (Based) Schools' (see Halbert and Kaser, 2002; Katz *et al.*, 2008). Moreover, Smith and Wohlstetter (2006) also attempted to gain insight into the different types of public-private partnerships that existed between charter schools and other organisations in the USA.

Other studies described collaboration models that exceeded the boundaries of schools and encompassed corporation and Higher Education Institutions (see Shinnars, 2001). In particular, school-university networks were seen as 'powerful ways for educators to form collaborations that can result in improved practice and results for students' (Allen and Hensley, 2005, p.19) whilst school-corporation partnerships were reported to result in 'higher levels of developmental assets and positive developmental outcomes, including better grades, better school attendance,

and more academic motivation' (Scales *et al.*, 2005, p.144). At this point, it has to be noted that as the focus of this thesis involves secondary education collaboration, school-university or corporation partnerships fall outside its scope and will, therefore, not be analysed in further detail.

Issues specifically related to international collaboration

As noted earlier, school collaboration can surpass the geographical boundaries of a single country and acquire an international dimension – especially in light of the developments in telecommunication technologies. In contrast to intra-national collaborations reviewed previously which appear to be driven mainly by state or local authority bodies and are quite often used as a vehicle for enhancing organisational capacity and overcoming burdens of practical or financial nature, international collaborations can be said to be more flexible, diverse and student-centred, utilising a wider range of tools and serving different objectives. Student collaboration and communication, the enhancement of cultural awareness, the creation of learning networks, the promotion of citizenship and the improvement of ICT skills are some of the central aims that appear to lie at the heart of international collaborative initiatives.

As implied earlier, the literature on international collaboration is relatively slight in comparison to the abundance of the on-going projects and an illustrative typology that would embrace all the models of international school linking does not exist. For example, the aim of the previous UK government was to 'engage in a programme of action...to enable every English school and college to establish a sustainable partnership with at least one equivalent institution in another country' (DfES, 2004, p.19). This resulted in the proliferation of UK initiatives during recent years, however, very little systematic and in-depth research has been carried out and 'little appears to be known for certain about how many international partnerships there are between UK schools and the rest of the world or what form they take' (Doe, 2007, p.8).

As such, the conceptual typology to be adopted in this thesis has been created to reflect the type of organisations that are responsible for facilitating twinning across countries at an international level. First, the term 'state-driven initiatives' will be

adopted to describe the number of collaborative projects that have been introduced, promoted and at some cases funded by official governmental bodies, policy makers and international organisations. Second, the term ‘non-governmental organisation (NGO) initiatives’ will be assigned to twinning opportunities established and facilitated by charitable organisations and agencies or missionary delegations that promote collaboration at different levels and through a range of programmes. Finally, the term ‘commercially driven initiatives’ will be used to denote the commercially-driven online platforms and programmes that are used to facilitate school collaboration and are usually available for an annual fee.

State-driven initiatives

Working with other schools at international level and engaging in collaborative projects can take place within the framework of a range of state-driven initiatives. First, the EU-initiated Comenius Programme aims to promote mobility and intercultural learning, enhance partnerships and teacher training, foster cultural awareness and improve language learning and ICT skills amongst the EU Member States and other non-EU countries. In particular, the ‘Comenius School Partnerships’ initiative seeks to promote collaboration at bilateral and multilateral level, facilitating mobility and providing a grant so as to cover the expenses of student and teacher exchanges. Alternatively, ‘eTwinning’, which comprises the main focus of this thesis, is seen as ‘a web-based social network of thousands of European schools, which can form partnerships to work on projects integrated in the curriculum of their pupils (Breuer *et al.*, 2009, p.167). In line with the Comenius programme is the ‘European Schoolnet’, a network of 30 Ministries of Education in Europe and beyond that seeks to provide insight into the ‘educational use of ICT in Europe for policy-makers and education professionals by fostering exchange at all levels of school education using innovative technologies’, and act ‘as a gateway to national and regional school networks’ (Vuorikari and Sarnow, 2005, p.1). Last, some other EU-driven but no longer active initiatives that sought to create networks of innovative schools and foster intercultural education were the ‘European Network of Innovative Schools’ and ‘myEurope’.

Aside from these EU initiatives, a number of other state-driven projects can be identified at international level. For instance, in line with the ‘National Gateway’

described earlier in this chapter was the 'Global Gateway' portal which operated at international level with the aim of 'bringing an international dimension to education' by means of international educational school partnerships and is intended to 'enable education to cross national boundaries and young people to become true global citizens' (DfES, 2004, p.12). At its peak the portal hosted a database of more than 17,000 registered schools from Europe to Africa and Asia and provided access to a range of resources, guidance and examples of good practice.

In contrast to the explicit nature of the state-driven initiatives described so far, there is a number of other collaborative programmes which cannot be placed within strict boundaries as they have been the result of consortia between state and NGO synergy - illustrating the often diverse and nebulous nature of collaborative projects. Such an example, is the 'Global School Partnerships', a UK consortium established by a range of not-for-profit associations and funded by the Department for International Development (DFID). It aims at promoting partnerships between schools in the UK and Africa, Asia, Latin America and the Caribbean and central to the programme's objectives is to broaden students' horizons and foster deeper knowledge and understanding of global development and cultural issues so as to provide them the skills and knowledge that will lead them to becoming active global citizens.

Similarly, the educational branch of the British Council also serves as a portal that provides information and access to a range of - mainly state-driven - school collaboration initiatives, such as 'World Links and Partnerships' and 'Connecting Classrooms'. In particular, 'World Links and Partnerships' provides opportunities for collaboration with a range of countries across the world, seeking to raise students' cultural awareness, enable language skills to be developed in a real context, either through face-to-face or virtual meetings. On the other hand, 'Connecting Classrooms' intends to be distinctive from the other programmes as it does not only foster student collaboration, but it also offers professional development programmes for practitioners and eligibility for school accreditation. Additionally, it does not involve the participation of only one school from each country, but schools apply in pre-formed clusters of two or more schools from the same country. An example of international school linking between Northern Ireland and Iraq within the framework of Connecting Classrooms highlighted the British

Council's intention to 'link up to 900 schools and 50 colleges with dozens of educational establishments in Iraq' (Mc Donald, 2009, n.p.).

NGO initiatives

A large number of international collaboration initiatives do not derive from governmental or policy making agencies but from charitable organisations and church-based delegations that seek to create links amongst schools worldwide so as to foster communication, raise cultural awareness, and at the same time provide support to schools of developing countries. Yet again, the UK appears to lead the way in a number of initiated opportunities for international collaboration, however, examples deriving from other countries are also available. For example, the Tony Blair Faith Foundations' internet-based 'Face to Faith initiative' aims to connect secondary school classrooms from around the world in order to support young people in reflecting on their own belief systems and those of others. Another UK initiative established in 2004 by the Specialist Schools and Academies Trust is the 'International Networking for Educational Transformation' (iNet), an international network of schools, organisations and individuals with the mission to build strong networks of schools and facilitate innovation across different cultures. Amongst its other actions iNet promotes international school partnerships based on shared interests and objectives and has facilitated links between thousands of schools in more than fifteen countries across the world. Schools are invited to 'link up with schools from around the world to share, inspire, collaborate and innovate' and a range of resources such as websites, publications and toolkits are provided to assist schools (iNet, 2009, p.25). What differentiates iNet from other initiatives is on one hand its global dimension and rich action with established school networks in most continents, and on the other, the annual membership fee that applies and which is country-specific.

'BBC World Class', on the other hand, is an initiative that aims to facilitate schools across the UK to take part in international collaborations. It acts as a portal that seeks to assist schools in their search of collaborative projects and provides a central resource of both state and NGO driven partner organisations and initiatives - offering a range of resources and materials for schools, as well as successful examples of twinning and advice on how to acquire funding or organise exchange

visits. The majority of these NGO-driven initiatives derive from charitable organisations and agencies that seek to establish links between schools in the UK and schools in developing countries in Africa, Asia and elsewhere. These types of collaboration provide students the opportunity to share experience, develop global citizenship values and be more sensitive towards issues on global justice and fair trade. As these initiatives seek to improve the teaching and learning conditions for the pupils in the developing countries, it is often the case that an annual contribution or fee is requested from the UK school in order to support its partner school. A range of these collaborative initiatives established by NGOs can be found in Appendix 1.

Similarly, 'Link Community Development' is a charity organisation that aims at developing global citizenship values and cultural awareness between the linked schools and encouraging sustainable school development by facilitating partnerships between Africa, the UK, Ireland and the USA. Other similar, but smaller-scale, charity organisations that facilitate linking with African schools are, for instance, 'African Revival' and 'AfriTwin'. Additionally, other initiatives offer opportunities to establish partnerships with schools in different parts of the world i.e.: 'Japan-UK live', the 'Arctic Voice', the 'Atlantic Rising' and many more. Last, further opportunities for collaboration at a more global level are presented through 'Rafi.ki', Swahili for "friend", an online learning community that facilitates the creation of partnerships between over two thousand schools from more than 120 countries worldwide.

Commercially-driven initiatives

In contrast to the state or NGO-initiated collaborative programmes presented so far, a range of other commercial platforms are also available for an annual fee and aim at facilitating international school collaboration. For instance, the UK-initiated 'SuperClubsPLUS' is seen to offer a protected environment within which children can utilise and develop a wide range of social skills ... and engage in creative behaviour' while 'teachers are encouraged to initiate School LinkUPs which are designed for inter-school collaborative projects' and develop national or international links with other schools (Pine, 2006, p.34-35). Similarly, the 'ePals Global Network' started as an online electronic pen pal service in 1996 and is said to

enable K-12 classroom-to-classroom project sharing, language practice and cross-cultural learning. The ePals Global Learning Community claims to be 'the largest online community of K-12 learners, enabling more than 325,000 educators and students in 126,000 classrooms across 200 countries and territories to safely connect, exchange ideas, and work together' seeking to 'truly bring digital age learning to life in classrooms' (ePals, nd, p.2) and 'can build a worldwide social network in education - a serious, controlled version of Facebook, for students in kindergarten through 12th grade' (Lohr, 2008, n.p.).

Issues related to the use of ICT in school collaboration

Since the development of collaborative projects in the 1950s, technology use has always been central to school collaboration – from telephony in the 1950s and 1960s, to audio and video recording in the 1970s and fax and computer networks in the 1980s. Yet, the introduction of the internet and other digital communications technologies in the classroom in the 1990s is seen to have raised new challenges and has given impetus to the notion of what has been termed as 'telecollaboration' or more recently 'e-collaboration'. It has been argued that:

...the hallmark of telecollaboration is the use of Internet communication tools (e.g. e-mail, chat, blogs, videoconferencing) to link linguistically and culturally disparate groups of language learners and teachers in institutionalised setting for the purpose of (bilingual) social interaction and project-based intercultural collaboration' (Belz, 2007, p.127).

As might be expected, telecollaboration has been celebrated by some commentators for allowing both 'synchronous' and 'asynchronous' modes of student interaction - 'synchronous' referring to technologies such as chat rooms or videoconferencing that allow online communication that occurs at real time conditions between pairs or groups and 'asynchronous' including email, discussion forums, wikis and blogs that allow delayed, non real-time communication. For example, from the early 1990s the arrival of the electronic mail was seen to offer opportunities for linking social studies students and replacing the use of regular mail that was considered 'impractical' due to the time it took for classes to correspond and letters to reach their destination (Barr, 1991). However:

The advent of electronic mail offers a solution to this problem. Using computers and modems, students should be able to take advantage of what modern technology can offer and correspond with students in classes thousands of miles away in mere seconds [...and] have an answer back almost immediately. Social studies projects linking children in

different countries should now be a reality because the immediacy and enthusiasm that could not be maintained by using regular mail can now be provided. Rapid response to students' questions and problems should also allow teachers to plan coherent, substantial units of work that fit into regular school schedules (ibid, p. 170-171).

Notwithstanding the enthusiasm to embrace these new digital technologies, Barr (1991) contended that the implementation of sophisticated pieces of technology did not in itself guarantee sound educational outcomes. Additionally, Chapple (1991, in Campbell, 2004) highlighted the importance of establishing well-defined objectives and clear expectations as well as ensuring that there is strong commitment between all partners of the collaborative project. Thus, since the 1990s, the use of computer and internet-based tools and applications to support inter-school communication and facilitate collaborative projects has continued to grow – welcomed by many educators as a ready means of providing increased possibilities for learning, communication and collaboration. According to O'Dowd (2007b, p.19) for example, the internet is often perceived as a 'culturally and linguistically "neutral" environment that provides learners of all different social, linguistic and cultural backgrounds with the same balanced "playing field" on which they can interact and learn'. Recently, the notion of 'telecollaboration 2.0' has emerged and is used to 'expand upon "traditional" theories and practices of telecollaboration' whilst it 'marks the beginning of a gradual shift towards new pedagogies, approaches and contexts' as well as new tool and collaborative opportunities (Guth and Helm, 2010, p.17).

Against this background, the first reports of online collaborative work between learners in different schools appear in the early 1990s when internet access on a regular basis became possible (O'Dowd, 2007a, p.4). Meadows' study (1992) of using Campus 2000 telecommunications system as an email provider to facilitate partnerships between teacher-training/Higher Education institutions and schools around the world marked one of the first instances of empirical research in this field. On the one hand, the study highlighted the enormous opportunities for 'multicultural teaching and learning' and for forming direct links whilst on the other a range of difficulties associated with high cost, computer access and lack of adequate training were reported (Meadows, 1992, p.123). Another empirical study from the beginning of the 1990s focused on how communications networks and email could be adapted to foreign language teaching in Finnish upper-secondary schools within the

framework of collaboration with a range of schools from the UK to the USA (Tella, 1991). The major inhibitors reported concerned: technical problems caused either by lack of experience in email use or infrastructure failure; high phone costs especially for the non-Finnish parties; differing timetables that prevented the use of a chat room; extra work from all participating parties. Yet, Tella's study also reported positive outcomes such as increased motivation and creativity for teachers and pupils, as well as improvement of technology and communicative skills.

Drawing on more recent literature of school collaboration, it can be noted that it is now common for school partnerships in developed countries to adopt the use of different types of digital technologies to facilitate student online communication and collaboration, while there has also been growing interest over the past years in the potential of web 2.0 applications. Nonetheless, exceptions appear mainly in cases where the schools involved are located in developing countries that lack the adequate infrastructure to support the use of such tools. According to Beldarrain (2006, p.146), it remains difficult to integrate digital technologies to countries that lack the connectivity, while Schweisfurth noted (2005, p.227) that there is great diversity amongst the schools within the UNESCO's Associated School Project Network. For instance, it was reported that only 47 per cent of the 7,400 ASPnet schools had access to the internet, which was often simply access at a local internet cafe while other schools lacked electricity and other basic prerequisites to ICT use. These teaching and learning conditions clearly create restrictions in terms of communication and exchanges between schools. Thus, the studies by Meadows and Tella not only provide insight of how technologies and online tools have improved increasingly during the last two decades but also highlight the technical or other restrictions that may still apply to partner schools from developing countries.

The remainder of this chapter now goes on to pay particular attention to empirical studies of internet-based school collaboration. Using the framework of internet use established in the opening chapter a distinction is made between 'web 1.0' school collaboration programmes, using established internet applications such as email, webpages, video-conferencing and so on, and what we can term 'web 2.0' collaborative initiatives where the use of tools such as wikis and blogs is seen to prevail. Whilst this distinction is necessarily crude, it will allow for the identification

of specific issues arising from the use of web 2.0 tools in school collaboration projects.

Web 1.0 based school collaboration programmes

The potential of ICT to facilitate school collaboration was presented through the 'Building E-Bridges Project', in the framework of which, schools from two different UK counties were linked and students communicated through email with the aim to promote positive attitudes to difference within a diverse community, encourage inter-faith dialogue and create a potential forum for discussions and debates (McKenna *et al.*, 2008). Likewise, within the framework of a collaborative project between pupils in Ghana and the UK digital technologies such as discussion forums were used 'to boost communication between teachers, schools and communities in Ghana and the UK' (DFID, 2007, p.11) while a different UK governmental report described how both pupils and teachers from schools in the UK and India collaborated through email and developed global understanding leading to the creation of 'an ongoing dialogue' (DFID, 2005, p.22). Other examples of ICT use to facilitate collaborative projects drawn from the literature include friendships built and partnerships established on the basis of email exchanges and videoconferencing between pupils in Scotland and Pakistan (Maitles and Gilchrist, 2006, p.75) and email communication between a UK and an Italian school within the framework of an environmental project (Barbosa *et al.*, 2004, p. 945). Similarly, a different study by Valentine and Holloway (2001) explored the use of ICT within the framework of the 'Interlink' project between British and New Zealand schools. The study reported how undertaking online activities and engaging in email communication 'enabled the children to develop more nuanced understandings of the similarities and differences between them... and construct a sameness across distance in their imaginative geographies' (ibid, p. 390).

Similar examples can be drawn when looking at the various reports on the 'Dissolving Boundaries' project, another initiative that has adopted an internet-mediated model of school collaboration. The project, first introduced in 1999, involved cross-national co-operation between schools at primary, post-primary levels and in the Special schools' sector in Northern Ireland and the Republic of Ireland with a special focus on the use of ICTs to form cross-educational linkages

and build a virtual 'community of practice' (Austin *et al.*, 2006). The tools used to facilitate communication and collaboration between students during the first years that the project ran mainly consisted of email, asynchronous computer conferencing and videoconferencing (Austin *et al.*, 2003). Research evaluations from various stages of the project throughout its duration reported beneficial outcomes associated with students' motivation, self-confidence and intercultural understanding, whilst they have also improved their literacy, communication, and ICT skills (Abbott *et al.*, 2004; Austin *et al.*, 2003; Austin, 2006). The latest report (Austin *et al.*, 2011) presenting aspects of the collaboration achieved during 2010-2011 by 100 partnerships between 180 schools indicated that a total of 320 schools had taken part in the project since its launching in 1999 and reported that:

The innovative work between linked schools, using a range of technology, has shown how frontiers of knowledge have been crossed in terms of linking subjects in the curriculum, in enterprise education, in terms of pupils' knowledge of others and of themselves and for teachers, in terms of their professional knowledge (ibid, p.1).

Likewise, the 'Palestinian-German School Twinning Programme' aimed to establish links between Palestinian and German students and foster a better intercultural understanding between the two nations. In particular, students were expected to interact with their counterparts, share and exchange knowledge and create learning resources for others. Further goals encompassed the improvement of students' skills in English and ICT, whilst the creation of 'virtual partnerships' was the main focus of the programme and computer and internet access was a determinative factor for participation (STP, nd, p.5).

Within the context of science education the potential of web-based collaborative projects was explored by the EU-based 'Communicare Nelle Science' and 'WebLabs' projects. In particular, the 'Communicare Nelle Science' project involved the use of email and chat room discussions and the creation of project websites. As Barbosa *et al.* (2004, p.945) reported, the use of communication technology was 'integral to the quality of the overall project and the collective knowledge and understanding that [was] developed'. Similarly, the 'WebLabs' project sought to 'convey to young learners the real spirit of mathematics as a field in which they can not only generate, test, and play with ideas, but also share them with their peers from different countries' (Mor and Sendova, 2003, p.36). Some of the positive findings reported in a later study revealed that the students were

‘stimulated to build valuable personal skills and abilities, such as [...] to share their experience by means of electronic communication, to discuss their work and to work in a team [and] to be (self-) critical to the work published in the virtual environment’ (Sendova *et al.*, 2004, p.6).

Web 2.0 based school collaboration programmes

In line with the state-driven collaborative initiatives presented earlier in this chapter, a range of online platforms has been created to facilitate student communication and collaboration. In particular, the new kinds of digital technologies are seen to create ‘exciting opportunities for supporting collaborative learning online’ as well as new pedagogical challenges (Laurillard, 2009, p. 5). Although web-based types of collaboration have long stimulated and enthused researchers and educators, it is in the past few years with the proliferation of social software that popular interest in online collaboration has bloomed (Forte and Bruckman, 2009). In this sense, web 2.0 tools and conditions are seen to facilitate schools collaboration and create new opportunities:

We believe that the Web 2.0 mindset and technologies enrich the sociocultural potential of telecollaboration...The open, collaborative and relational mindset of Web 2.0 and the multimodal, social, Internet based 2.0 environments and tools place the emphasis on collaboration and participation in Telecollaboration 2.0 (Guth and Helm, 2010, p. 21-22).

As discussed earlier, a range of EU-funded initiatives were created within the framework of the European Schoolnet which has acted as a corporate portal - aggregating other platforms and projects that ranged from ‘explora’, the European gateway to science education to ‘ins@fe’, the European network of e-safety awareness nodes. The eTwinning platform, in particular, is seen as an online community and ‘a full-fledged professional development tool’ for teachers providing them with project ideas and support for building links with partner schools (Scimeca, 2010, p.9) whilst ‘TwinSpace’ has emerged as the official eTwinning virtual classroom where students can store and share content, communicate and collaborate without interference from outsiders as precautions have been taken to ensure its privacy and safety (Miguela, 2007, p.93).

As regards eTwinning, the study of Coutinho and Rocha (2007) described the ‘Crossing the Borders’ project that took place between a Portuguese and a Czech

school in 2006-2007 and employed TwinSpace, a Moodle and a collaborative blog. Some of the reported outcomes were seen to be the optimization of student's autonomy, creativity and teamwork skills as well as increase cultural awareness and development of citizenship, cooperation and ICT skills (ibid). Similarly, a different study reported that it is necessary for participants in collaborative projects such as eTwinning to be confident and skilled in using the new technologies for accessing, processing and sharing online information through the appropriate computer software programme (Öztoğ and Özdener, 2007, p.127). A range of other eTwinning projects has been featured in EU and other reports and publications as examples of good practices, such as the collaboration between UK and Afghan schools with the use of mobile phone technologies (Muir, 2010) and the 'Schoolvision' in which thirty schools across Europe created music video-clips for an online song contest (Hepburn, 2010) whilst Freedman (2010) compiled an online book of 87 web-based projects from around the world. These cases, however, will not be presented in further detail since they do not form part of an in-depth research study but rather offer a simplistic overview of cherry-picked examples of successful projects.

Examples of other, mainly state-driven, online collaborative platforms include, 'eLanguages' which was initiated by the British Council enabling teachers to create a virtual working environment for the students, facilitating international collaboration. It is available in various languages and can serve as a meeting point for partner schools – operating either as a 'virtual classroom', a 'portfolio' or a 'showroom' according to the needs of each partnership. The 'UK-German Connection' and 'Schola-21', on the other hand, are at large focused on promoting the German culture. As such, the 'UK-German Connection' seeks to foster contact and understanding between schools in these two countries through participation in 'the voyage', an online portal. Similarly, 'Schola-21' is a web-based collaborative platform where teachers can set up an online 'project room' and individual pupils and groups can create their personal profile and get together 'virtually' to exchange ideas and take part in collaborative projects with the use of email, forums, chat rooms and the project room. At a more international level, the 'Global SchoolNet', initially founded in 1994, is another collaborative programme with the purpose of helping teachers find learning partners across the world whilst the 'Flat Classroom Project' uses a range of web 2.0 tools to facilitate the creation of

educational networks of teachers and students 'for the purpose of sharing experiences in a focused and monitored environment' (Lindsay and Davis, 2010, p.14).

It can be argued that governmental bodies that endorse the use of ICT appear to be particularly wary of the dangers arising from unconstrained internet interactions and a key consideration seems to be ensuring that students collaborate within a private and safe online environment. Within the framework of the 'Dissolving Boundaries' project, for example, strict monitoring and security auditing took place to ensure that the Moodle virtual environment remained safe at all times (Austin *et al.*, 2006). In line with the growing concern on safety issues seems to be the rising enthusiasm to embrace the new 'web 2.0' tools within an educational context. Thus, as described above varying state-driven collaborative online workspaces have been developed to facilitate specific projects and a range of web 1.0 tools such as email, discussion forums, chat rooms as well as web 2.0 technologies such as blogs and podcasting have been implemented in these online spaces to ensure a safe collaborative environment.

Eyre (2009), for example, described his concerns about security issues with regards to students using social networking sites as opposed to the safe online environment that the 'rafi.ki' platform was seen to offer. On one hand, it resembled Facebook, facilitating students to communicate and share ideas with their partners but on the other its web design tools allowed them create profile and webpages to share without any worries over safety issues. In particular, Eyre (2009, p.7) reported that:

Introducing students to the web design element was easy - the tools are simple and straight forward [...] Students used the site intuitively almost immediately, [they] designed photography pages and asked their peers from around the world to critique their work. This led to some great interactions, and helped to break down our West Country isolation.

A similar web-based collaborative case involved the pupils of two schools in Iraq and the UK who employed the 'Rafi.ki' platform to discuss and plan their project. The focus was on students making cultural links and learning about ICTs and 'then they all accessed a "virtual school" - or managed learning environment - that allowed them to create online pages with sounds, images and text' (Ward, 2009, n.p.).

However, despite the proliferation of collaborative initiatives alongside the development of digital technologies, little empirical research has been conducted in the field of web-based school collaboration with most descriptions of case studies drawing on collaborations within a higher education context. For example, the Skype and wiki-based 'Padova-Dickinson exchange' between HE students in Italy and the USA reported difficulties in receiving and offering peer feedback because of cultural differences whilst 'the students, of their own accord, established alternative ways of communicating in order to carry out the collaborative writing assignment' such as Facebook (Guth and Marini-Maio, 2010, p.418). Another example from a HE context, was the telecollaborative project between foreign language students in Chile and the Netherlands that employed video-web communication tools. The aims of the project were to facilitate online interaction, challenge stereotypes and promote the understanding of cultural differences and amongst other positive outcomes the students highlighted the importance of video conferencing which contributed to 'overcoming anonymity and favouring proximity and familiarity' whilst, overall, 'technology made it possible to overcome geographical barriers connecting learners from distant continents, who were able to break down their classroom walls, situating their language learning experience in a broader environment' (Jauregi and Banados, 2010, p.434,436).

Conversely, findings from the 'Tridem Project' between British and American university students of French and native French speakers reported that on one hand synchronous online communication allowed students to establish direct real-time contact, however, the use of blogs was seen to be more popular as it offered more time for reflection and freedom to work at individually convenient times at their own pace (Hauck and Lewis, 2007). Other examples of web-based university collaborative project included a USA-Japan Telecollaboration (Meguro and Bryant, 2010), the 'Intercultura Project' (Fratter and Helm, 2010), an e-mail exchange between foreign language students in Spain and Ireland (Vinagre, 2007) and many more (see O'Dowd, 2007c; Guth and Helm, 2010).

Notwithstanding the perceived positive outcomes resulting from online collaboration and the examples of successful projects reported so far, some commentators have drawn attention to the range of issues associated with less successful collaborative efforts. For instance, O'Dowd and Ritter (2006, p.624-625) have argued that 'the

literature in the area reveals that success in telecollaborative exchanges is far from guaranteed' and it is often the case that online collaborative projects end in 'failed communication' resulting in low levels of participation, indifference, tension between participants, or negative evaluation of the partner group or their culture (O'Dowd and Ritter, 2006, p.624). This 'dysfunction in on-line exchange has been attributed to a complex, often confusing, array of factors related to the students and the sociocultural contexts in which they are operating, the organisation and structure of the exchange, and the type of interaction which takes place between the groups in the online environments' (ibid, p.624) and can be associated with a learner's level of *intercultural communicative competence* (ICC). In their attempt to develop an inventory of factors that can lead to cases of unsuccessful online collaboration described in the literature, O'Dowd and Ritter (2006) summarized these perceived reasons according to individual, classroom, socioinstitutional and interaction level (see figure 3.2).

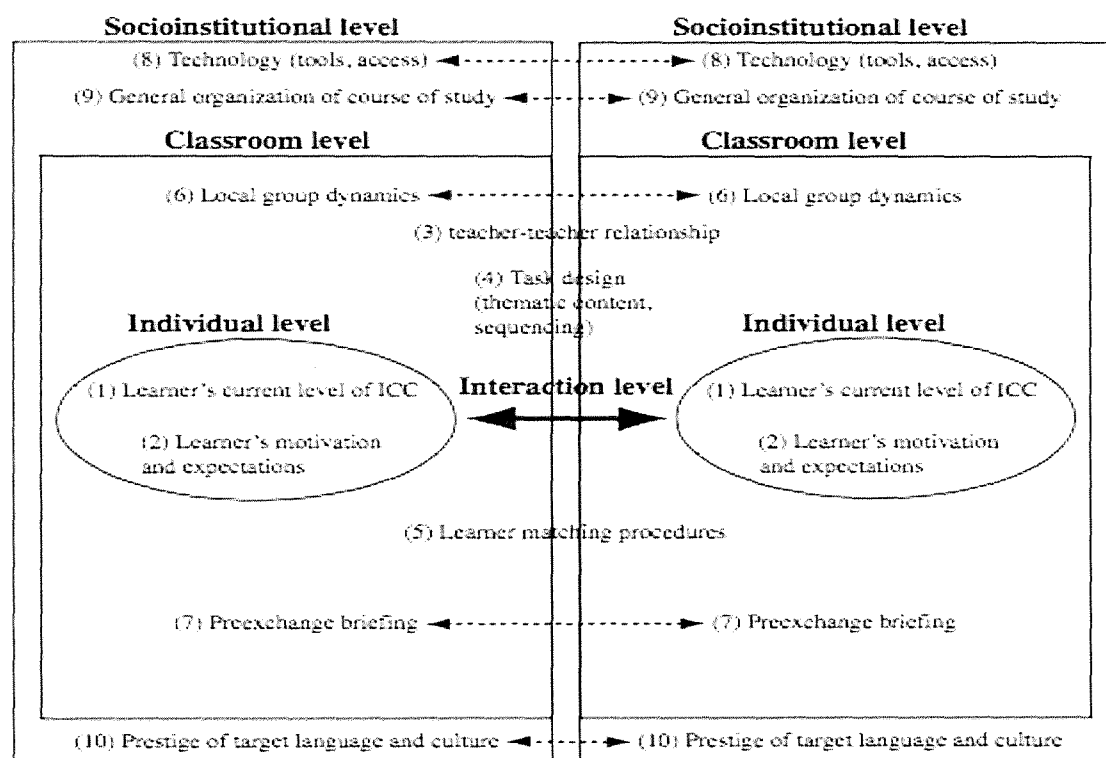


Figure 3.2: Inventory of reasons for failed communication in collaborative projects (Source: O'Dowd and Ritter, 2006).

Conclusion

This chapter has taken a detour from looking at the (educational) use of digital technologies and it has focused on the issues underpinning web-based school collaboration. In particular, it has shown that, although collaborative programmes appear to have a long history across the past fifty years, the enthusiasm to embrace and promote new initiatives at national and international level has grown considerably since the 1990s with the emergence of digital technologies. Furthermore, the number and range of these collaborative initiatives can be said to have benefitted from increased governmental and policy maker support as well as from increased funding opportunities and greater motivation and interest amongst the teachers. This resurgence of school collaboration can be associated with a range of cultural, political and economic factors and it is not surprising that it has attracted much attention while a number of educators as well as policy makers and governmental bodies appear to have embraced the potential of new technologies to facilitate collaboration.

Still, this heightened importance belies the general lack of empirical research in the area, which, as this chapter has highlighted so far, does not allow for generalisations, particularly with regards to the successful implementation of the second generation 'social software' or web 2.0 tools. Nonetheless, it can be argued that the appropriation of digital technologies for school collaboration has been slow and this can be associated with a number of factors. Apart from the more obvious technical inhibitors relating to the technologies, connectivity and infrastructure, a range of other themes and factors appear to have underpinned less successful collaborative projects. As Crook (2012, p.77) argues, collaboration and communication practices 'do not exist independently of the socio-cultural structures'. On that note, the next chapter will go on to explore the wider, socially-shaped picture of web-based school collaboration.

Chapter 4: Research approach and research questions

Introduction

Looking at how educational technologies are employed for online school collaboration within the framework of eTwinning projects is a rather complex and multi-faceted topic that should be explored across different layers of analysis in order to get the ‘big picture’ and reach sufficient depth and richness of understanding. As introduced in the opening to this thesis and as discussed in full details in chapter 3, Twinning is an EU initiative promoted by National Support Centres in Ministries across a range of EU countries and prospective members and has been adopted by a range of teachers and schools at local level. With this span of interests from the international to the local in mind, a broader, socio-technical approach has been employed in the present study. As focusing merely on either/or questions of technologies or schooling is not sufficient, we need to look at the wider picture of online school collaboration with the use of digital technologies. Thus, this brief chapter will serve to expand upon the basic tenets of the social approach taken in this thesis towards educational technologies, thereby leading to the formulation of a set of working research questions.

The social shaping of technology approach

In particular, from a theoretical and conceptual perspective, the present study has been informed by the ‘social shaping of technology’ approach. As such the main aim of this section is to explore the role of the social context in shaping technology use in the form of the eTwinning initiative as well as allowing for the possibility of a mutual shaping of the social by the technological. The chapter draws on some fundamental questions as the starting point for discussion: ‘Is technology neutral?’, ‘Does technology shape society or vice versa?’, ‘How does the shaping process happen?’ In particular, it aims at exploring the contrasting concepts of technological and social determinism and looking at the benefits of taking a socially-focused approach to researching education and technology by investigating the social context and relations of educational technologies use. As Bromley (2001, p.23) argues:

There are good reasons to think technologies carry tendencies built in during their development that predispose them to have a certain social impact; yet there is also ample evidence that the impact of a single technology can vary widely, depending on who is using it and why.

First, in attempting to conceptualise the digital technologies employed for online communication and collaboration, the present study adopts Lievrouw and Livingstone's (2006, p.2) description of the social and technical aspects of technology who argue that there are three distinct and yet interconnected aspects to describe what technology is: 'the artefacts and devices used to communicate or convey information; the activities and practices in which people engage to communicate or share information; and the social arrangements or organisational forms that develop around those devices and practices'. In this sense, educational technologies should not be viewed as merely technical devices that are adopted by each project for online communication and collaboration. It is equally important to look at the teacher and student practices within the school context whilst at the same time taking into consideration how other macro-level institutional factors can affect the implementation and use of those technologies. For example, implementing wiki tools within formal educational contexts should be approached from different aspects: first, as an artefact the wiki technology entails particular characteristics such as collaborative properties that distinguish it from other tools; second, wiki implementation is associated with particular practices such as collaborative writing and content creation; and last, the wiki can refer to particular social arrangements or 'contexts' that emerge around its use.

As highlighted in previous chapters, the role of educational technologies has been a field of contention over the past three decades ranging from a euphoric optimism that new technologies can reinvent schooling to pessimistic accounts of the negative impact of educational technology use. Underlying many of these accounts is the notion that technology will somehow cause change – for better or for worse. These arguments are often driven by a deterministic approach where technology is viewed as the major governing force that 'determines history' (Williams, 1994, p.218). As Miller (2011, p.3) described, implicit in a 'technologically deterministic' view is 'the vision of technology as something separate and independent of society. Inventions can merely "happen", and then society has to deal with the consequences of that happening and the new ways of life that follow'.

Two versions of technological determinism are identified according to Smith (1994, p.2): i.e. 'a "hard view", which perceives technological development as an autonomous force, completely independent of social constraints', and 'a "soft view", which holds that technological change drives social change but at same time responds discriminately to social pressures'. Adhering to a technological deterministic approach in its most extreme form can lead to simplistic conclusions suggesting that technological change is inevitable and that the properties and powerful forces of the technologies alone determine the way they are used independent from social influences. As Miller (2011, p.96) argues 'it is important to reiterate that technologies themselves do not determine society, but instead emerge from a context of socially constructed needs, wants and priorities, as does the way in which a technology is adopted'. Within an educational context, in particular, it is emphasized that educational technologies can enhance teaching and learning practices and can inevitably improve different aspects of education. As we have seen in chapter 3, the promotion and implementation of eTwinning often appears to be driven by a determinist approach. For example, the re-design of TwinSpace and the additions of a wiki and blog tool were seen as the decisive upgrading that would inevitably enhance communication and collaboration for both students and teachers taking part in eTwinning projects. However, as Oliver (2011, p.374) argues:

Claiming that technology makes certain actions natural does not really explain design, but rather serves to hide how designers communicate their intentions and preferences to users. It does not explain how people learn to use technology, or how deviant uses develop.

As such technological determinism does not take into consideration the social relations and conditions that underpin the implementation and use of digital technologies in education, but instead positions technologies as the driving forces behind social change. Additionally, as MacKenzie and Wajcman (1999, p.5) assert, this 'promotes a passive attitude to technological change. It focuses our minds on how to adapt to technological change, not on how to shape it'. In contrast, the social deterministic approach suggests that social interactions and constructs alone determine choices and actions made - perceiving technology as a product of the society in which it is developed. According to Green (2010, p.9) 'social determinists agree that technology is an important change agent, but they argue it is not developed outside society but is an expression of priorities and choices that are

made within social systems'. As a result, every technological development can be seen as born out of the needs of 'elite groups' such as armed forces, bureaucratic and corporate forces who hold the power to sponsor, develop and market technologies accordingly.

Both these forms of determinism are built around the assumption 'that everything is caused (determined) by a sequence of previous conditions and events, operating with regularity and, in principle, predictability' (Pannabecker, 1991, p. 45). This, however, can be seen as a rather problematic and over-simplified approach that fails to grasp the richer nature of educational technology practices and leaves many important questions open. Establishing that either technology alone can determine social progress, or conversely, that all technological advances are driven solely by social elite groups makes for a limited understanding of the complex nature of educational technologies. As Bromley contends (2001, p.24):

A technology's biases may establish a set of initial conditions favoring one or another outcome, but the drama of what actually does transpire cannot be foretold...although the introduction of new technologies does create an altered situation in some ways, preexisting power relations most often find a way to shape usage of the new technology so as to re-establish themselves, simply in a different form.

There is, therefore, need to adopt a more nuanced analysis of educational technologies that moves beyond extreme theories of determinism and focuses instead on an alternative approach based on the mutual 'social shaping of technology' also known as SST (MacKenzie and Wajcman, 1999). According to this line of thinking, 'it is accepted that there can be no predetermined outcomes to the development and implementation of educational technologies. Instead, any technological artefact is seen as being subjected continually to a series of interactions and "negotiations" with the social, economic, political and cultural contexts that it emerges into' (Selwyn, 2011b, p.36). The social shaping of technology allows us to develop a better understanding of the cultural, economical and political factors that underpin the design, promotion, management and eventual use of educational technologies (see Williams and Edge, 1996). Contrary to approaches that only look for positive or negative outcomes and 'cause and effect' explanations, exploring educational technologies through the lens of social-shaping theory allows for a multi-dimensional analysis - not least when looking at the even

more multifaceted and complex issue of employing educational technologies for online school collaboration. As Williams and Edge (1996, p. 866) argue:

SST studies show that technology does not develop according to an inner technical logic but is instead a social product, patterned by the conditions of its creation and use. Every stage in the generation and implementation of new technologies involves a set of choices between different technical options. Alongside narrowly 'technical' considerations, a range of 'social' factors affect which options are selected - thus influencing the content of technologies, and their social implications.

The social shaping perspective has gained growing recognition within the social sciences during the last two decades and a range of analytic frameworks have been proposed that vary in the way they approach technology and society (Green, 2010). Within the over-arching framework of social shaping, different 'micro-theories' have emerged and have been developed. Most popular amongst these is perhaps the 'Social Construction of Technology' (SCOT) theory developed by Trevor Pinch and Wiebe Bijker (1984) - arguing that technologies are formed socially and are interpreted differently by social groups and stakeholders. In this sense any given technologies can take different forms and meanings and different 'relevant social groups' can form different understandings of that technology, leading to 'interpretative flexibility' (Kline, and Pinch, 1999). Another framework is that of the 'Domestication of Technology' which offers a more user-related aspect of the social shaping theory. This approach sees technologies as being integrated and appropriated into the users' daily life according to the users' practices and the influences of their social environment. As such technological innovation is not just a matter of 'production' or 'engineering' but consumption and use of technologies are also 'essential components of the innovation process' (Silverstone and Haddon, 1996, p.44). A different strand of the SST approach is the 'Theory of Consumption' which argues that our identities are formed on the basis of what we choose to consume in terms of technological artefacts (Green, 2001). Last, feminist theories can also be located within the SST over-arching framework - focusing on 'how technological endeavor has, by and large, been preserved as a male domain' and how 'the label technology is largely reserved for what men do' (Bromley, 2001, p. 25).

Having taken into account the various analytical strands that have emerged within the 'social shaping' umbrella, it should be noted that this thesis views the domain of

SST as a 'broad church' and embraces a 'very broad definition of STT, without implying a particular consensual "orthodoxy", clear boundaries, or claims of ownership to the field' (Williams and Edge, 1996, p. 866). As there are more than one ways of looking at educational technologies from the STT standpoint, this research study follows the lead set by these approaches in exploring the range of social actors and factors that can affect the implementation of digital technologies for school collaboration focusing on different levels of analysis: the 'micro', 'meso' and 'macro' levels of description (Selwyn, 2011b). As Kozma (2003, p.11) describes:

Innovative pedagogic practices are embedded in a concentric set of contextual levels that effect and mediate change...At each level there are actors and factors that mediate change. According to the literature, the successful implementation of innovative practices depends not only on the characteristics of the innovation but also on factors such as classroom organisation and personal characteristics of the teachers and students (micro level), the school organisation and personal characteristics of administrators and community leaders (meso level), and national and state policies and international trends (macro level).

At a micro level of analysis this thesis looked at the teachers and learners who took part in the four eTwinning projects as individuals attempting to make sense of a range of emerging issues. These micro-level issues included individuals' motivation and disposition to engage with the initiative; their participation and contribution throughout the project; the teachers' familiarity not only with the tools but also with alternative pedagogic approaches; the barriers all participants might have faced; the way they envisaged themselves within this online community; their collaborative and pedagogic practices; their in- and out-of-school engagement and familiarity with digital technologies; and last, their relation with their partner team and the time and personal effort they invested in the project.

Notwithstanding the importance of these micro-level concerns, there was a need to consider the wider context of the educational institution where the projects were materialized. At meso level, thus, it was considered important to look at the local governance of education and in particular at the school, as a physical, organisational and cultural space. In this sense the present study explored whether and how different school settings and cultures, technological infrastructures and other meso-level actors such as the local authorities affected the implementation and eventual effectiveness of using educational technologies for online communication and collaboration within the framework of eTwinning projects.

Finally, at macro level ‘government led initiatives, national policy, national curricula, assessment regimes define the broad conditions in which innovations are developed and negotiated, politically and culturally’ (Perrotta, 2011, p. 3). In this sense, this study aimed at macro level to develop an understanding of the EU eTwinning initiative as a wider institutional organisation of education policymakers, as well as national and EU leaders and to explore how the wider structure of eTwinning at national and European level can affect the projects’ outcomes. The possible interrelationships among different factors and levels are illustrated in Figure 4.1 (Kozma, 2003, p.12).

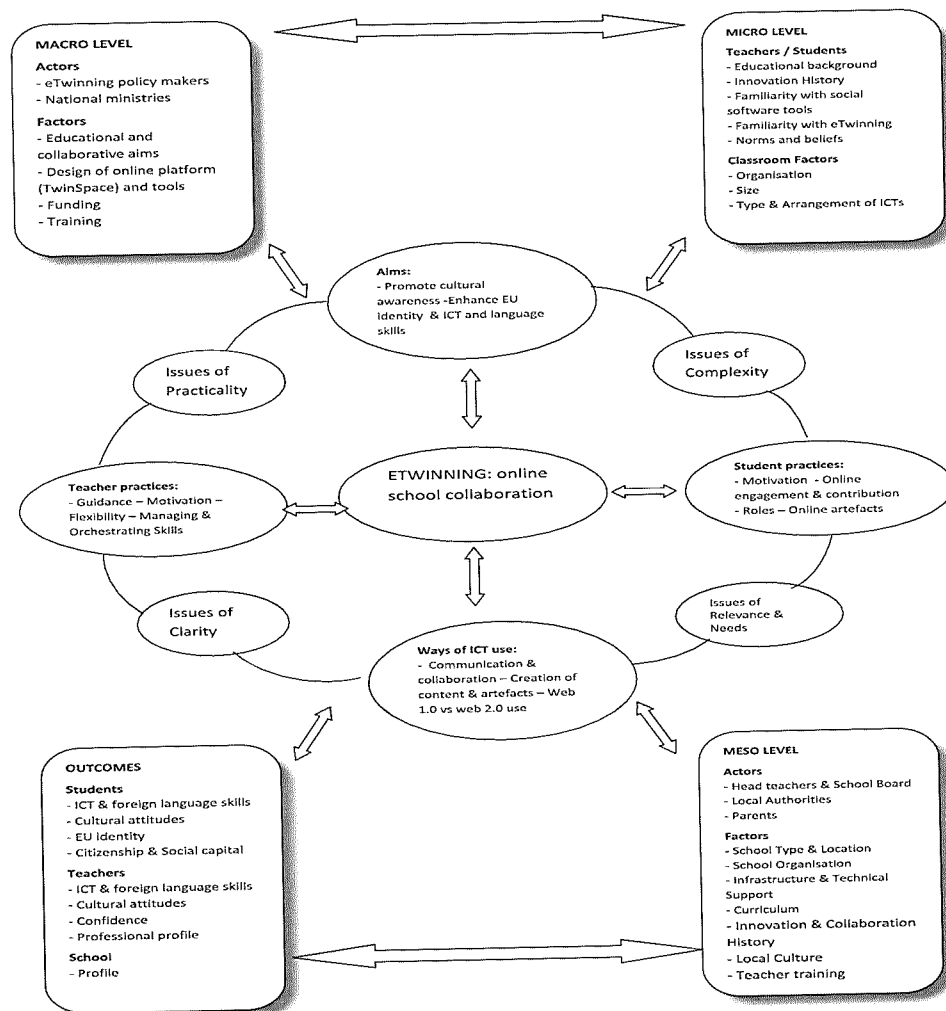


Figure 4.1: Different levels of analysis for the current study (adapted from figure of SITES Module 2 Conceptual Framework, Kozma, 2003).

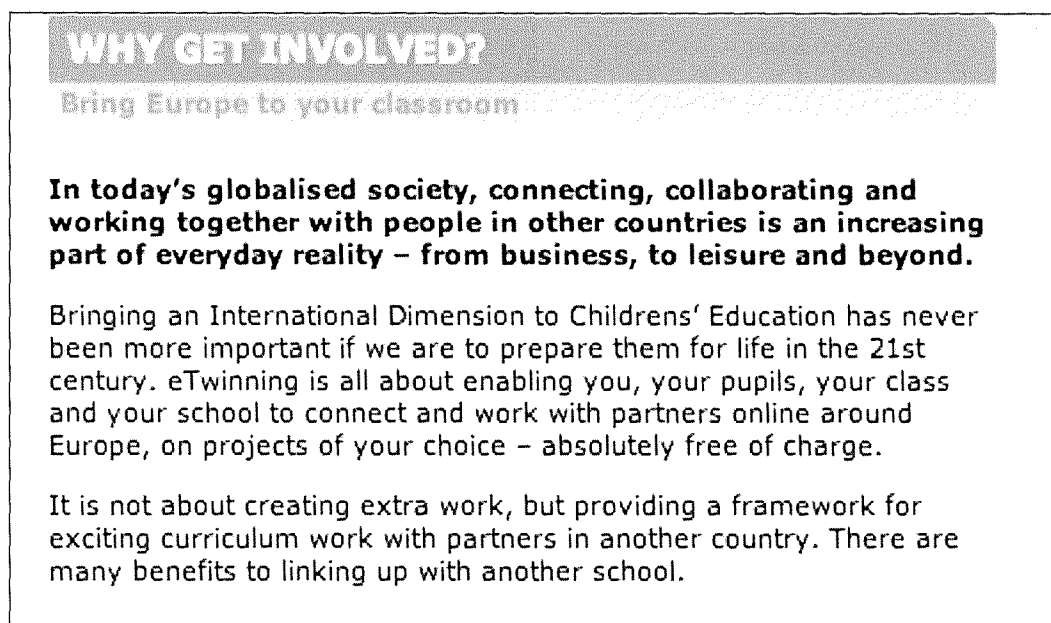
While both the social shaping perspective and Kozma's framework of contextual levels have informed this study, the thesis returns as essentially open-minded to what may be found. As Castells (2000) observed, it is also worth wearing 'one's theoretical clothes lightly' when approaching the complex issue of technology use in society rather than being theoretically driven. These approaches form the theoretical basis for this thesis' over-arching research aim which is to look at the 'wider picture' of educational technology and, in particular, to explore and unpack the range of factors that need to be taken into consideration with regards to the implementation of educational technologies for school collaboration at all different levels and contexts.

Imperatives for the increased use of digital technologies

As discussed in chapter 2, digital technologies have come a long way since their initial advent some decades ago and have taken a range of forms and shapes during their course of development. Alongside the current enthusiasm with regards to their educational potential, a range of internal and external imperatives have made the implementation of digital technologies within educational settings more acute than ever before. As Selwyn (2011b) argued, the internal imperatives are associated with harnessing the potential of digital technologies to solve long-standing educational problems; supporting and enhancing teaching and learning; increasing flexibility and supporting elearning and virtual communities; improving the organisational effectiveness of educational institutions; and widening access to education and participation. On the other hand, a range of 'top-down' external imperatives are also seen to be used by academic and practitioners alike. These relate to keeping up to date with technological changes and meeting the demands of the 'knowledge economy' and the information society; providing sufficient levels of 'human capital' and enhancing 'employability'; and meeting the needs of the 'digital native' students (ibid).

These internal and external imperatives are seen to shape to a large extent the eTwinning programme. Born in 2004 and officially launched in 2005 as an initiative of the European Commission's eLearning programme, it is intended to introduce a more European dimension in the classroom and raise students' cultural awareness. Inherent in the organisation and success of an eTwinning project is said to be the use

of digital technologies. Digital technologies are viewed as not just the online platforms that will facilitate collaboration and interaction but are also seen as the pedagogical tools that will enhance teachers' and students' ICT skills and will equip them with lifelong skills. The eTwinning programme has attained a relatively high profile with European education and the large number of registered projects has often been celebrated in EU reports as an indication of success and has been widely promoted by organisations such as the British Council as the 'Community of Schools in Europe' (see figure 4.2).



WHY GET INVOLVED?
Bring Europe to your classroom

In today's globalised society, connecting, collaborating and working together with people in other countries is an increasing part of everyday reality – from business, to leisure and beyond.

Bringing an International Dimension to Childrens' Education has never been more important if we are to prepare them for life in the 21st century. eTwinning is all about enabling you, your pupils, your class and your school to connect and work with partners online around Europe, on projects of your choice – absolutely free of charge.

It is not about creating extra work, but providing a framework for exciting curriculum work with partners in another country. There are many benefits to linking up with another school.

Figure 4.2: 'The benefits of eTwinning' (Source: British Council: www.britishcouncil.org)

The main eTwinning platform run and maintained by the Central Support Service (www.etwinning.net) is the eTwinning portal and is available in twenty-five languages. The portal comprises the main 'meeting point' for teachers and provides online tools to find partners, share ideas and set up projects. Publicly accessed areas include the 'news' section with interviews, publications and press releases as well as the 'professional development' section with information on teacher training workshops and online learning events. Alongside its informational role the portal hosts a range of ready-made 'process kits' to assist and inspire teachers at the beginning of their projects as well as an open-access blog for sharing experiences and seeking advice. This information can be publicly accessed, however registered users are also able to access their personal online 'desktop' where they can create and manage their profile, host information on their past and current projects, search

for partners and engage in discussions with other members of the eTwinning community. Furthermore, as soon as an eTwinning project has been approved teachers are also given authorised access to 'TwinSpace', a private online environment devoted to a particular project that consists of the Project Activities section, the Staff Room, the Pupils Corner, the Chat and a general guidelines section. TwinSpace is flexible in nature and the collaborating teachers can configure the particular tools they wish to use for their project e.g. a blog or a wiki tools.

Additionally, the recent 'facelift' and addition of new tools such as blogs and wikis on the TwinSpace platform has been seen as facilitating a shift towards a more collaborative phase of eTwinning:

It is impressive to see that eTwinning has adapted so readily to one of the deeper trends of social behavior nowadays: networking online in new configurations, thus creating new communities and new ways of relating. Yesterday's talk was technology and information, the time of eTwinning 1.0. Today, thanks to the symbology of Web 2.0, it is technology and society. I would like to pick up on a point made in chapter one, and stress that "social networks" are more than the buzzword of the moment; it is the "natural destiny" of the Internet...eTwinning's vocation is to provide a new grammar of relationships to the European teaching community (De Kerckhove, 2010, p.7).

As such the new tools and conditions are seen as particularly suited to promote web-based school collaboration. These internal and external imperatives associated with the use of digital technologies both for teaching and learning as well as for school collaboration suggest a rather deterministic approach and do not necessarily reflect the realities of technology use in education. As some more sceptical commentators have observed, school realities are not wholly determined by the implementation of particular technologies but are also affected by social practices:

Classrooms are steeped in cultural norms and practices, many of which have been constant for many decades. Using ICT doesn't necessarily change the norms and practices in the classroom unless the teacher or some other force establishes and guides new habits (Loveless *et al.*, 2001, p. 73-74).

Indeed, it could be argued that in the fast-changing field of education technology the initial enthusiasm to embrace a particular tool usually fades away as soon as the next technology emerges on the horizon – resulting in little change in educational practices. Some critics have identified this endless 'pursuit of the new' as a major reason why the promises of educational technology are rarely fully realized and have described this as a recurrent cycle of 'exhilaration/scientific-credibility/disappointment/teacher-bashing' (Cuban, 1986, p.5-6). In this sense,

digital technologies are often seen to promise a great deal but deliver far less. The eagerness to celebrate the educational promises of the latest tool in the hope that it will reconfigure classroom practices has seldom chimed with the 'wider picture' of the realities of technology use in actual school settings. As Sutherland and Sutch (2009, p.30) described:

Those of us who have been around since the early days of the introduction of computers into schools have observed how each new technological development, from Logo to multimedia, to the Internet to mobile technology to Web 2.0, has been heralded as being the final breakthrough that will make the difference to education. We have also observed that riding the wave of each technological breakthrough never begins to address the issues that face education'.

These cycles or waves of 'hype, hope and disappointment' have not allowed much space for more careful reflection and evaluation of the actual educational benefits and/or practical impediments surrounding the use of digital technologies in education. Additionally, academic commentators have long argued that these assumptions about the potential of digital technologies should be placed within the wider context of the 'grammar of schooling' (see Tyack and Tobin, 1994). This notion of the 'grammar of schooling' is seen as:

The set of organisational assumptions and practices that have grown up around the development of mass schooling and have come to be seen as defining it, to become, in effect, education as practised. It frames what is possible in schooling, and acts as a major barrier to significant change in schools (Robertson and Dale, 2009, p.152).

From this perspective, although some changes have taken place within the school setting during the past decades particularly with regards to technological infrastructure, the social structures and powers of schools have, to some extent, remained intact. As Zhao and Frank (2003, p.808) described 'despite the generous investment in, and increased presence of, computers in schools [...] computers have been found to be unused or underused in most schools'. In light of the above, it is worth exploring whether the opportunities that web 2.0 entails will prove worthwhile of the hype and will create fruitful conditions to take the transformation of education beyond this cycle of disappointment.

Conclusion

In light of the above, the need for a study on the collaborative opportunities afforded by digital technologies could be argued to be pressing. Notwithstanding the new

conditions and the enthusiastic claims made by educational commentators and technologists alike with regards to the potential of educational technologies to enhance school collaborative practices, little quality and in-depth research has been so far conducted in the field of implementing web 2.0 technologies to facilitate online collaboration. Therefore, my doctoral research will be conducted in order to explore empirically how web 2.0 technologies are being used to facilitate collaboration and interaction between schools within the framework of eTwinning. In particular, a number of questions are identified as worthy of empirical investigation as to how educational technology is ‘working-out’ in practice in each of the eTwinning schools:

- How can the use of digital technologies create opportunities for online student interaction and collaboration?
- How do these opportunities ‘fit’ into existing school practices?
- What are the drivers and inhibitors for engaging with the eTwinning project for teachers?
- What are the drivers and inhibitors for engaging with the eTwinning project for students?

In the following chapter, attention is turned towards achieving methodological congruence – in particular justifying the ‘fit between the research problem and the questions, fit between the research question and the method, and of course, fit among the method, the data and the way of handling the data’ (Morse and Richards, 2002, p.33). As such, the next chapter now goes on to deal with the methods employed in the present study.

Chapter 5: Methodology

Introduction

This chapter outlines the mixed-methods design that was adopted for this research study in order to explore the relationship between web 2.0 technologies and online school collaboration in the framework of eTwinning projects. First, it discusses the apparent ‘goodness-of-fit’ between the study’s research questions and the case study research design that was selected in relation to other approaches and then it presents the specific methods that were used for data collection. Then, the chapter provides a detailed description for the development of the particular research instruments and the sampling process employed. This is followed by a discussion of the practicalities of how the data collection was conducted, the approaches to data analysis and other practical methodological issues that emerged throughout the study.

Research Design

Adoption of a case study approach

As the first three chapters of this thesis have highlighted, the present study is concerned with how digital technologies are being used to facilitate communication and interaction between schools within the framework of eTwinning collaborative projects. In particular, a number of questions arise concerning the eTwinning programme relating to whether and how interaction and co-operation is enhanced, why teachers have selected to employ specific tools and platforms, which practical issues and technical implications emerge and how teachers and students feel about and engage with these new technologies. In order to address these questions a qualitative approach was adopted, specifically what can be termed a comparative, multiple case study design. This decision was based primarily on the types of the research questions that explore and elicit perceptions of experiences, practices and beliefs with respect to online school collaboration. As such, the first section of this chapter describes in more detail the rationale behind this choice of research design, before going on to present the procedures used for data collection and analysis.

A case study was seen by Gerring (2007, p.211-212) as ‘the intensive study of a single case for the purpose of understanding a larger class of similar units’ whilst a case study research design ‘may refer to a work that includes several case studies’. In addition, Eisenhardt (1989, p.534) also defined case study as a ‘research strategy which focuses on understanding the dynamics present within single settings’ whereas according to Stake (1995, p.2) ‘the case is a specific, a complex, functioning thing [...] It is an integrated system. The parts do not have to be working well, the purposes may be irrational, but it is a system. Thus people and programs clearly are prospective cases’. Furthermore, Feagin *et al.* (1991, p.vii) pointed out that the case study ‘remains an extraordinarily useful and important strategy for social analysis’ within a wide variety of contexts whilst Yin (2009, p.4) argued that ‘the case study method allows investigators to retain the holistic and meaningful characteristics of real-life events’. As such, case studies are commonly used in social science research and consist a preferred means of research design ‘in examining contemporary events, but when the relevant behaviors cannot be manipulated’ (ibid, p.11). One particular strength of case study research is its ability to deal with a range of evidence – from documents and artefacts, to interviews, and observations. It can be, thus, argued that case study research allows the ‘exploration of a phenomenon within its context using a variety of data sources’ and, thus, ensuring that research questions are ‘not explored through one lens, but rather a variety of lenses which allows for multiple facets of the phenomenon to be revealed and understood’ (Baxter and Jack, 2008, p.544).

A case study method was therefore selected for the present study, given the overarching research aim of exploring the use of digital technologies to facilitate eTwinning school collaboration – a topic of interest that can be seen as fulfilling Yin’s (2009, p.18) description of ‘a contemporary phenomenon in depth and within its real-life context’. However, despite the apparent ‘goodness-of-fit’ between this study’s research questions and the case study research design it is worthwhile considering the possible limitations as well as strengths of using a case study approach. For instance, case studies have often been criticized as not allowing for generalisation of findings whilst their validity is sometimes questioned (see Berg, 2007). In particular, it has been contended that as a ‘detailed examination of a single example of a class of phenomena, a case study cannot provide reliable information

about the broader class, but it may be useful in the preliminary stages of an investigation since it provides hypotheses, which may be tested systematically with a larger number of cases' (Abercrombie *et al.*, 1984, p. 34).

The above argument has often been viewed as a 'misunderstanding' of the purposes of the case-study approach and, as Yin argues (2009), although case studies may not allow for statistical generalisation, a degree of analytical generalisation can still be adopted either from single or multiple types of case studies. Similarly, it has been contended that 'one can often generalise on the basis of a single case, and the case study may be central to scientific development via generalization as supplement or alternative to other methods'. As Flyvbjerg (2006, p.228) goes on to argue, 'formal generalization is overvalued as a source of scientific development, whereas "the force of example" is underestimated'. Additionally, it has been highlighted that 'the strength of case study is that it can take an example of an activity ... and use multiple methods and data sources to explore it and interrogate it' (Stark and Torrance, 2005, p.33).

With these thoughts in mind, the present study adopted a comparative, multiple-case approach rather than focusing on a single case study of one eTwinning school project. Research design using multiple case studies is said to allow not only 'cross-case analysis and comparison' but also 'the investigation of particular phenomenon in diverse settings' (Darke *et al.*, 1998, p.277). Since the objective of this study was to investigate differences in ICT implementation for school collaboration, a multiple case study approach focusing on comparable organisations in different countries was seen as most appropriate. In particular, a comparative approach was selected on the basis that eTwinning constitutes a cross-Europe initiative that involves a range of countries. As such it was considered relevant to explore how projects were conducted and how new technologies were implemented between and within more than one participating country. To this end it was decided to comparatively examine schools' participation in eTwinning initiatives in the UK and in Greece. The choice of Greek and UK schools was in the first instance pragmatically informed (although it also has a theoretical logic) and the reasons supporting this choice will be highlighted in more detail in the section that follows on sampling methods.

In order to facilitate within-country participation, a multiple-case study design involving more than one sample project in each country was adopted. Yin (2009, p.53) describes this design as a single study that looks at more than a single case, where the insight is to ‘consider multiple cases as one would consider multiple experiments’, thus, following a ‘replication’ design. This design has also been termed as ‘multisite qualitative study’ that aims to address the same research questions in a number of settings’ and seeks to ‘permit cross-site comparison without necessarily sacrificing within-site understanding’ (Herriott and Firestone, 1983, p.14). The apparent benefit of using a multiple-case study approach is that the evidence can be considered to be more ‘compelling’ and the overall study more ‘robust’ (ibid). What is more, the researcher also needs to invest more time and resources to conduct the data collection. These limitations notwithstanding, the multiple-case study approach was adopted on the basis that it allowed the thesis ‘to analyze within each setting and across settings’ whilst ‘a holistic case study with embedded units only allows the researcher to understand one unique/extreme/critical case’ (Baxter and Jack, 2008, p.550).

Consideration of other potential research designs

While the multiple case-study approach was eventually selected, a number of other research designs were considered for this study, however, they were deemed less suitable when examining the particular research questions and the practical implications involved. For example, consideration was given to adopting an ethnographic approach, which involves the researcher ‘becoming a part of the “natural setting”’ (Fielding, 2001, p.148) by conducting ‘extensive fieldwork of various types including participant observation, formal and informal interviewing, document collecting, filming, recording’ (Van Maanen, 1982, p.103). This approach, however, requires very long periods of time spent in the sample schools and this would not have been possible considering that this study looked at a multiple samples located in different countries (see Yin, 2009, p.15). Moreover, due to curriculum and time restraints there was a sporadic rather than systematic engagement with the eTwinning project which varied across schools ranging from weekly to monthly project meetings and activities. For these reasons an ethnographic research approach was deemed as unrealistic, if not pointless.

A quantitative cross-sectional approach, on the other hand, focusing on conducting a large-scale survey in all the eTwinning schools would have provided a rich overall picture of the emerging patterns of which web 2.0 tools were being used in which countries. However, this approach would not suffice in providing insights as to how and why these tools were selected and what the teachers' and students' experiences from using them were. As Yin (2009, p. 115) argues, surveys do not focus on 'the measurement or recording of individual behavior' and this approach would fail to answer the majority of research questions. Moreover, at the official time of planning this study's design an extensive survey project was being conducted by the official eTwinning body and it was decided that replicating a survey with limited access compared to the formal authorities would have been of restricted usefulness. Finally, an action research approach (see Lewin, 1946) was also considered as a research method, however, it was also dismissed as inappropriate for the present study because of time and space restrictions similar to that of an ethnographic approach. Additionally, action research is said to be 'a method of research in which creating a positive social change is the predominant force driving the investigator' whilst it 'consciously seeks to study something in order to change or improve it' (Berg, 2007, p.224 and 226) whereas the focus of this thesis was intended to be more exploratory and objective rather than seeking to change the existing school and teacher practices.

Choice of Methods within the Case Study Research Design

When adopting a case study approach, the researcher is faced with making a range of decisions related to the methods of investigation employed, the selection of the sample and the time spent in each fieldwork site. It follows that the issue of research breadth versus depth emerges as a key consideration (see Stark and Torrance, 2005). These methodological considerations aside, a range of practical factors also emerge such as the nature and context of the research settings or time and budget limitations (Blaikie, 2008). In order to address all these challenges, it was decided that the present study would adopt a mixed methods approach, and therefore aspiring to achieve a broad and in-depth exploration of the research questions. The mixed methods approach is especially suited to the case study research design and is seen to combine 'methods that gather and represent human phenomena with numbers

(such as standardised questionnaires)' along with 'methods that gather and represent human phenomena with words (such as open-ended interviews and unstructured observations' (Greene *et al.*, 2005, p.274). As Hamel *et al.* (1993, p.45) argue 'the case study is an in-depth investigation [that] uses different methods to collect various kinds of information and to make observations...based on a great wealth of empirical materials'.

Additionally, the use of multiple sources of evidence is seen to help address 'the problems of establishing the construct validity and reliability of the case study evidence', leading to 'data triangulation' by providing 'multiple measures of the same phenomenon' and allowing for more 'convincing and accurate' case study findings (Yin, 2009, p. 114, 116 and 117). Triangulation is defined by Somekh and Lewin, (2005, p.349) as:

...a method whereby data from at least different perspectives (for example, teacher, students and observer) are collected on the same issue-event so that they can be cross-validated. Alternatively, [...] different kinds of data (for example, video, interview and questionnaire) are collected on the same issue /event and used to shed light on each other.

Similarly, triangulation has been described as the use of 'two or more methods of data collection to test hypotheses and measure variables' (Frankfort-Nachmias and Nachmias, 1996, p.206) or 'the use of multiple lines of sight', allowing researchers to 'obtain a better, more substantive picture of reality' (Berg, 2007, p.5).

With these considerations in mind, the following mixed methods of data collection were used within the study's case study research design. As Blaikie (2008, p.274) argues 'different methods *can* be used to explore aspects of the same (assumed) 'objective' reality, regardless of whether they use words or numbers'. In particular, different methods can be adopted for different stages of a research project whilst, although the data from each stage 'cannot be readily translated', it can be 'interpreted in the light of data gathered at another stage' (Blaikie, 2008, p.275).

Primary Data Collection

Following on from the secondary data analysis, an embedded case study design was selected for the primary data collection stages of this thesis, as it allows for both 'qualitative and quantitative data and strategies of synthesis or knowledge integration' (Scholz and Tietje, 2002, p.14). The primary data collection methods of

this study involved: face to face interviews with the participating teachers as well as interviews with the head teachers in the four case study schools; focus-group interviews with the students; email interviews with the four partner school teachers; direct observations at the UK and Greek schools while the students and teachers were involved in eTwinning related activities; and last data collected from the online projects hosted on TwinSpace or an external wiki provider. These methods are discussed in further detail in the sections below.

Interviews

As Yin argues (2009, p.106) 'one of the most important sources of case study information is the interview'. There are several forms of interviews that could have been adopted for the present study ranging from in-depth to focused or structured to semi-structured and unstructured interviews. Although interviews hold a prominent place amongst social science research methods and are considered 'insightful' tools that provide 'perceived causal inferences and explanations', they can also entail pitfalls as the interviewees' responses 'are subject to the common problems of bias, poor recall, and poor or inaccurate articulation' (Yin, 2009, p.102). Additionally, interviewing as a research method can be largely challenging and 'especially labor intensive' as it involves a range of different stages from establishing access and contacting potential participants to carrying out the interviews and transcribing and often translating the data (Seidman, 2006, p.12). Notwithstanding the challenges involved, the present study adopted the use of interviews as a data collection method - using semi-structured interviews with participating staff and head teachers and focus group interviews with participating students.

Semi-structured interviews

Semi-structured interviews (also known as semi-standardised interviews) are said to be located somewhere between the extremes of the completely structured and unstructured (or standardized and unstandardized) interviews. The semi-structured interview design allows for more flexibility but at the same time entails a degree of consistency, with the researcher employing a set of predetermined questions whose order and wording can be altered during the course of the interview whilst the interviewer may also add or delete probes or answer questions and provide

clarifications (see Berg, 2007; Fielding and Thomas, 2001). Thus, semi-structured interviews, as suggested by the term, have a more loose structure 'resembling a conversation' (Brown and Dowling, 1998, p.72) and were considered most appropriate for the purposes of this study.

A series of repeated face-to-face semi-structured interviews were, therefore, conducted with the participating teachers from the UK and Greek schools, whilst email interviews were conducted with the teachers from the partner schools. The obvious benefits of online interviews are those of overcoming time and space limitations as well as travel and transcription issues (see Fielding and Thomas, 2001; Kivits, 2005). On the other hand, a range of limitations are associated with web-based interviewing relating to difficulties in 'establishing authenticity in online environments' (James and Busher, 2007, p.101) as well as issues of involuntarily and voluntary disconnection and the 'loss of symbolic visual cues' from lack of face-to-face interaction (Berg, 2007, p.75). Nonetheless, the wide geographic spread of the participants and the nature of this study rendered the use of online interviewing a primary method of data collection for the partner schools.

Focus group interviews

Focus group interviews are said to stand 'among the most widely used research tools in the social sciences' (Stewart *et al.*, 2007, p.1) and can be defined as interviews of small groups of individuals in order to explore their views and experiences on a particular topic (Cronin, 2001). Researchers have been increasingly using focus group interviews as they 'can access group norms and provide insights into the formation of views which cannot be so readily achieved via individual interviews' whilst they often 'give facilitators the chance to observe how individuals within groups react to the views of others and seek to defend their own views' (Barbour and Schostak, 2005, p.42). Similarly, focus groups are seen as an effective means of researching people's experiences and attitudes as they 'allow for various modes of expression ... [and] may elucidate shared and dissenting attitudes within a population' (Kitzinger, 1995, p.299). Moreover, focus groups are said to be 'particularly appropriate' when the researcher seeks answers to open-ended questions and wishes to encourage the participants 'to explore the issues of

importance to them, in their own vocabulary, generating their own questions and pursuing their own priorities' (ibid).

Focus group interviews also entail limitations and a range of factors can affect their results. The data quality from focus group interviews is said to be largely influenced by the group dynamics and the skills of the facilitator to moderate and motivate in the case of dominant participants overshadowing others who are more shy whilst only a limited number of questions can be set resulting to lower in-depth data acquisition (see Berg, 2007; Stewart *et al.*; 2007). Similarly, Greenbaum (1998) highlights some common limitations in focus group research with regards to the selection of unsuitable participants or inadequate moderators whilst Kitzinger argues that 'the articulation of group norms may silence individual voices of dissent' whilst the presence of more than one participant 'compromises the confidentiality of the research session' (Kitzinger, 1995, p.300). For the purpose of this study, small focus group interviews were selected as a means to explore students' experiences and their engagement with the web 2.0 tools used in their eTwinning projects. This allowed the researcher to interact directly with the students and obtain data in a more flexible and less intimidating way than conducting individual, face-to-face interviews.

Observations of classroom practices

Since 'a case study should take place in the natural setting of the "case"', observation is considered an important method of primary data collection (Yin, 2009, p.109). In particular, it has been argued that 'if a case study is about a new technology... observations of the technology... at work are invaluable aids for understanding the actual uses of the technology ...or any potential problems being encountered' (ibid, p.110). Observation is seen to entail 'the systematic noting and recording of events, behaviours, and artifacts (objects) in the social setting chosen for study' (Marshall and Rossman, 2006, p.98). Two different types of observation were considered, 'direct observation' where the researcher is a passive observer during a field visit and 'participant-observation' in which the researcher can assume a variety of roles and becomes an active participant in the events (see Yin, 2009; Tellis, 1997). The challenges associated with the observation as a method of data collection relate to time and cost of conducting these visits as well as difficulties in achieving broad cover without a team of observers and the danger of altering

behaviour or the course of the event because of the researcher's presence in the field (Yin, 2009, p.102).

For the present study, direct unstructured observation where the researcher 'should be as unobtrusive as the wallpaper' (Glesne and Peshkin, 1992 in Tellis, 1997) was selected as the aim was to observe and not to interfere with teacher and student practices while engaging in eTwinning-related activities. In particular, the role of the researcher was that of a simple observer who would 'follow the flow of events...[whilst] behaviour and interaction continue as they would without the presence of a researcher, uninterrupted by intrusion' (Adler and Adler, 1998, p.81). Additionally, direct but unobtrusive observation of the online tools, such as weblogs, wikis and other online platforms was conducted throughout the duration of the eTwinning projects once the researcher was granted access in order to observe teacher and student participation and contribution.

Documentary analysis of online spaces

Lastly, invaluable in the collection of primary data were the online tools used for each project and the content analysis of the artefacts (e.g. wikis, blogs, forums etc.) configured and maintained by the participating students and teachers. As Schneider and Foot (2005, p. 157) highlight:

web objects...including texts, features, links and sites, can be viewed both as inscriptions of web producers' practices and as potentiating structures for online action on the part of web users. In this approach, web objects and the technologies used to create them are considered as tools that are employed in and that mediate these practices as well as artefacts resulting from them.

The process of accumulating online data on one hand can be considered convenient as it deals effectively with limitations posed by geographically dispersed samples. On the other hand researching online spaces also involves a more dynamic online presence and requires constant commitment and engagement by the researcher as online content can be added or edited on a daily basis whilst issues of authorship emerge. Additionally, it can be argued that 'the hyperlinked and multilevel nature of the web makes the identification and demarcation of units analysis a critical but difficult task...[and] the co-produced nature of the web...makes problematic the attribution of authorship to producers of specific bits' (Schneider and Foot, 2005, p. 157).

Virtual ethnography was employed for the collection of data from the online spaces - involving active and in-depth engagement with the online field. According to Hine (2008, p.259), online ethnography consists 'a form of learning through immersion, supported by more systematic forms of enquiry' so that online social life can be understood in its own right. As such, static and passive data collection from those online settings would have failed to do justice to the full spectrum of the content and interactions present on the project web-based spaces. This need for a more dynamic online engagement of the researcher in turn leads to the issue of the 'ethnographic presence' (see Hine, 2008). Developing an online presence that is both effective and as unobtrusive as possible is vital for virtual ethnography. Since the majority of online data collection for this study involved the use of asynchronous communication tools such as wikis, blogs and discussion boards it was possible for the researcher to remain almost invisible to the participants.

Another issue associated with researching online spaces is seen to centre around ethics and in particular 'whether the citation of online exchanges violated expectations of privacy where at least one of the participants has not given permission for this to happen' whilst 'linked to this is the question of the visibility and positioning of the researcher in relation to the research' (Beavis, 2008, p. 1224). However, this did not pose a problem to the present research study since access to the online spaces was restricted to the project participants only and no other external participants were allowed.

Research Methods

As we have seen so far, the first two sections of the chapter looked at the theoretical underpinnings of the case study research design that was selected and the specific methods employed for data collection. This third and final section will now go on to provide a more detailed description of the particular research instruments, the sampling process as well as discuss the range of practicalities associated with data collection in the field, data analysis and any other practical methodological issues that emerged throughout the study.

Primary data collection

Choosing the cases

Sampling is defined as the process of selecting units (e.g. people, organisations, etc.) from a population of interest. According to Gerring (2007, p.21) ‘a sample consists of whatever cases are subjected to formal analysis: they are the immediate subject of a study or case study’. In contrast to the generally accepted terms used when describing the process of research sampling such as random, systematic, stratified sampling, and so on, it could be argued that the sample for this multiple case study derived from a purposive and yet ‘serendipitous’ sampling approach. As Neuman (2000, p.198) reasons, in purposive sampling the researcher:

selects cases with a specific purpose in mind...cases that are especially informative to identify particular types of cases for in-depth investigation.

The range of restraints that applied as to the prerequisites of the type of sample projects necessary for this comparative and multiple case study resulted in a long and tense period of sample selection. As Miles and Huberman (1999, p.31) argue, ‘very seldom does a start up sampling frame survive the lovely imperfection and intractability of the field’, and thus it must often ‘be shifted and reframed’. In the case of this research study, the restrictions and obstacles that emerged and will be described in more detail below meant that the sampling strategies often had to be reconsidered and in the end this resulted in a serendipitous pick of school samples.

According to Ragin (2005, p.1) ‘implicit in most social scientific notion of case analysis is the idea that the objects of investigation are similar enough and separate enough to permit treating them as comparable instances of the same general phenomenon’. In this sense, a purposive sampling approach was adopted and the aim was to focus on secondary education eTwinning projects that took place in the capital city and surrounding areas of UK and Greece and were making use of web 2.0 tools during the academic year 2009-2010. The choice of countries was not random but resulted from an analysis of the secondary statistical data as found in a range of studies looking at ICT school implementation in the EU.

Recent surveys on school use of ICTs highlight the great diversity and the variations that exist between these two countries. According to a survey conducted by the European Commission ‘the variation between countries is huge, with the United Kingdom reaching 94% of schools, where “computers and the internet are integrated into the teaching of most subjects” compared to a mere 42% in Greece’ (European Commission, 2006, p.21). Thus, it can be argued that the UK appears to act as one of the forerunner EU member states in terms of both infrastructure and ICT use whereas Greece seems to be struggling to catch up. However, the analysis of the 2009 eTwinning official statistics showed that the percentage of eTwinning schools in both countries did not differ that greatly, reaching 18% in the UK and 14% in Greece. Likewise, there were many similarities as regards the number of schools that had won an eTwinning award or a quality label since the start of the programme in 2005 whilst the quality of the award-winning projects did not differ substantially either.

In total, the process of tracing the case study sample projects and acquiring access lasted almost six months. A further restriction, other than the geographical one, was that the language used for collaboration could be either English or Greek (any level) or German (beginner’s level) so that the researcher would be able to engage in an online observation of the project without facing any language barriers. With these restrictions and prerequisites in mind it was decided that a sample of three projects in Greece and the UK respectively would consist the multiple case study of this research study– this number would allow for any last minute ‘backing out’ of the participants.

Since the term ‘case’ can be fairly problematic as it entails a range of usages and meanings and it can be conceived differently by social scientists (see Ragin, 2005), it should be noted that ‘case’ is here interpreted as the eTwinning project that took place in the academic year 2009-2010 and involved teachers and pupils in Greece or the UK as well as their respective partners in the other countries. It is wise to disambiguate this since the project participants differed from case to case, from a ‘regular’ classroom to the members of the school’s reading club or random students who took part in eTwinning as an after-school activity. Thus, the case does not necessarily refer to a particular class or to the school as an institution, although this

will also be explored in later chapters. Additionally, it should be noted that since eTwinning is a collaborative initiative the Greek and UK participants were 'twinned' with a range of partners across Europe. Once the Greek and British teachers agreed to participate in the research, the partners were contacted with the request to participate as well, however, this was not a prerequisite for the sampling process. As long as they did not object to their Greek and UK partners taking part in the research, their participation was desirable but not determinant for the data collection.

In May 2009 a first attempt was made to approach the British and Greek eTwinning National Support Services in order to request a list of the active registered schools in both countries so as to contact them directly, however, for data protection reasons this request was turned down. My next request to the National Support Services was to send them an email of my research aims and the type of sample schools I was looking for so that this would then be forwarded to the active eTwinning schools and there would be no issues of anonymity and confidentiality emerging. This was also denied and I was advised to use the 'eTwinning schools' map on the official platform to locate the projects or schools that interested me and then contact them myself. At first, during the summer of 2009, a range of teachers that fitted the criteria regarding country, school level and language were contacted through their school's central email. This resulted in finding two case samples in Greece before the end of June 2009 but without having similar luck in the UK - the most common issue being not receiving a reply to the emails sent to schools. Another successful strategy was 'snowballing' which produced a third Greek school sample by the end of July 2009.

Being an appointed state school teacher in Greece I was able to register and create a profile on the eTwinning platform so I started to look for possible sample cases there. The process was rather time-consuming as neither the eTwinning search tool nor the Forum allow for a more elaborate and advanced search that fulfils more than one criteria. Nonetheless, as of September 2009 I resumed the effort of finding sample cases in the UK and apart from contacting teachers through the eTwinning email I also posted a message on the eTwinning forum. The end result was finding two sample projects as two teachers replied to the forum message and the email respectively. Out of the fifteen UK-based teachers that fitted the prerequisites and

were contacted from June to October 2009 and with the exception of the teacher who agreed to take part in the research only two more negative replies were received.

In addition to using the eTwinning platform as a sampling tool, emails were forwarded to online mailing lists such as ICT RN and MirandaNet Community but to little avail since no other further sample project was found. The most emerging issue was that the eTwinning platform and the search tools listed all 'registered' teachers, which differed greatly from the category of 'active' teachers and can partly justify the lack of responses to the email messages sent. Lack of time was another pressing issue and characteristic is the case of another teacher who replied initially: negotiating access took place over ten emails from summer 2009 till winter 2010, however, it was impossible to proceed to any other form of field work due to constant lack of time on behalf of the teacher.

In October 2009 and whilst the first round of visits to the Greek schools was being organised one of the three teachers withdrew as she decided against taking part in a project that academic year and the attempt to trace a replacement sample was not fruitful. Thus, the research was conducted in four secondary schools, two in the UK and two in Greece. Despite all sampling difficulties, in the end the sample projects were varied in terms of geo-demographic and socio-economic factors and yet comparable in terms of pupils' age and school level. These included one inner city and one suburban school in Athens as well as one suburban school in London and one school in a small town located in the county of Warwickshire. In brief, the sample projects are presented in the table below, however, a more detailed description of the schools, the participants, the aims of each project and the tools used are described in each separate case study.

At this point it should also be noted that case study four can be described as a rather unsuccessful endeavour - only four students from the Greek school were registered but never accessed the platform and several attempts throughout the academic year towards configuring the TwinSpace wiki tool and working on the project remained fruitless primarily due to a range of technical and other impediments. The wiki was only accessed by the Greek teacher and updated a few times at the initial stages of the project and, thus, the eTwinning collaboration never materialised. However,

since the purpose of this thesis is to explore the issues and tensions surrounding the use of social software for school collaboration it was considered appropriate to include this failed example of an eTwinning project. As Cole argued (2009, p. 146), ‘currently, published material relating to Wiki’s used as teaching tools only seek to promote positive elements of use...Uniquely, presenting a failed case of Wiki use provides the educational community with an opportunity to learn from the mistakes of others’.

	Case 1	Case 2	Case 3	Case 4
Countries	UK - Greece	UK - Germany	Greece Denmark	- Greece - Italy
School type and location	Sixth form college in small town in the Midlands	Lower secondary in suburban Greater London	Upper secondary in suburban Athens	Vocational inner-city school in Athens
Project	The Spartans	Hobbies and traditions	Love in literature, philosophy and psychology	My studies, my future
Participants	1 teacher 38 pupils aged 16-18	1 teacher 9 pupils aged 13-14	1 teacher 60 pupils aged 15-17	1 teacher 10 pupils aged 16-17
Partners	Rural upper secondary school in northern Greece (1 teacher – 30 pupils aged 15-16)	Secondary school on the outskirts of Berlin (1 teacher – 18 pupils aged 13-14)	Rural upper high school in south-west Denmark (1 teacher – 60 pupils aged 16-19)	Vocational school in a small town in south Italy (1 teacher – no registered pupils)

Table 5.1: Description of projects and schools

Development of data collection tools

In order to investigate the research questions outlined earlier in this chapter, a range of research instruments was developed and used, whilst data collection was organised in three consistent phases in the UK and Greek sample projects respectively. These three different phases took place in early winter, spring and summer of the academic year 2009-2010, reflecting the beginning, the middle and the final stage of each eTwinning project in each case study school. A two-page semi-structured interview schedule was developed for the participating teachers, while follow-up interviews were also conducted in the second and third phase of data collection. Similarly, a one-page interview schedule was developed for the first

focus-group interviews with the students. Depending on the number of the participating students and the analysis of the initial interview, follow-up focus group interviews were conducted with all participating pupils. All these interviews were carried out in different school spaces such as a free classroom or the Staffroom depending on what was available on the day of the visit. Furthermore, semi-structured interviews were also developed and conducted with the head teachers of all schools during the final visit. Email interviews with the partner teachers were also conducted at the final stage of all four projects due to the geographical restrictions of face-to-face interviews with the range of partners scattered across Europe.

Additionally, direct class observations were employed for data collection throughout the three phases of field work in both Greek and British schools in order to gain in-depth and detailed understanding of and systematically record teachers' and students' practices whilst engaging with eTwinning related activities. During the class observations I tried to be as unobtrusive as possible so that my presence would not alter the participants behaviour and the course of the event. Also, as Stake argued (1995, p.62) it was also necessary to keep 'a good record of events to provide a relatively incontestable description for further analysis and ultimate reporting'. This was achieved by on-site note taking and typing of the field notes as soon as possible in order to avoid a time lag between observing and recording (Merriam, 1988). Moreover, the physical space of the classroom, the library or the computer lab where the observations took place was fundamental to meaning-making, therefore, detailed descriptive records were kept and photographs were taken.

Once access was granted by the teachers, online observation of the various tools such as wikis, blogs and forums took place throughout the duration of the projects. This was conducted systematically by logging in weekly on the eTwinning platform or in the case that an external wiki provider was used, email notifications were received and the researcher was able to keep track of all the on-going changes. The total number of interviews and observations carried out are illustrated in table 5.2 below whilst examples of the semi-structured and focus-group interview questions can be found in the appendices 2 and 3. Additionally, it should be noted that all

interviews were transcribed and -in the case of the Greek participants- translated into English by the researcher (a professional translator).

	Case 1	Case 2	Case 3	Case 4
Semi-structured teacher interviews	3	3	3	3
Focus-group student interviews	18	6	20	3
Class observations	3	3	3	2
Semi-structured head teacher interviews	1	1	1	1
Email interviews with partner teachers	1	1	1	1

Table 5.2: Data collection procedures

Ethical considerations

Since the data collection process involved the participation and observation of human subjects and in particular students younger than 18 years old, a range of ethical issues emerged and were taken into consideration prior to planning the data collection methods. Amongst the most serious ethical concerns that received careful consideration were issues of informed consent and confidentiality by voluntarily involving the subjects and protecting their anonymity. All the teachers were informed in detail of the various research stages and the level of both their personal and their students' involvement before agreeing to take part in the study, and protecting the schools' anonymity was paramount. Permission was obtained from each school's head teacher, whilst in the case of the Greek participants a special permission was requested and granted by the Ministry of Education. Teachers and students were also made aware of the right to withdraw at any stage.

Another major concern was to ensure teachers' and students' anonymity and disclose their identities by applying pseudonyms in all cases. Moreover, in order to safeguard confidentiality and anonymity identifying records and lists were not kept longer than absolutely necessary. However, as the research involved documentary analysis of a range of online material such as blogs and wikis careful consideration was given on how to minimize the risk of identification for the participants. However, only registered users who had received an invitation from the teachers could access these tools, so this did not pose a problem in terms of safeguarding confidentiality. Finally, all teachers were given the option of reviewing their interview transcripts so as to approve the content whilst they were also contacted

and informed about the research findings. Overall, the measures adopted were compliant with the Institute of Education's guidelines on research, as well as being in accordance with the British Educational Research Association's code of conduct for researchers. Last, the researcher underwent a Criminal Record Bureau check and was granted formal Ethic Approval from the Institute of Education before embarking on data collection.

The practicalities of the research design

There is often a wide discrepancy between describing and analysing research methods in theory and actually embedding these methods in practice – the actual research can frequently be quite messier than the ideal, ‘polished’ version encountered in textbooks. As Hey (1997, p.41) argues ‘research in the real world is lived as a series of rapidly unfolding and occasionally unpredictable events about which one has to make practical decisions’ and this was quite the case during this research journey. A range of challenges emerged during the months of data collection, ranging in nature and easiness to overcome. During the first phase of data collection the researcher encountered technical problems in accessing the eTwinning platform similar to the ones some teachers and students had also faced. These problems were soon overcome and presented an invaluable opportunity for the researcher to explore the ‘trouble-shooting’ mechanism of eTwinning and also to gain greater insight as regards the difficulties the participants had to face themselves.

In addition, other practical challenges occurred that momentarily affected the initially planned course of data collection. These included student sit-ins and/or the swine flu pandemic in Greece, a Greek school stranded in Denmark whilst visiting its partner there because of the volcanic ash incident and a teacher undergoing a traumatic experience and taking long sick leave. This range of setbacks resulted in some visits and interviews being postponed and rescheduled, however, overall the difficulties were mainly practical, they were overcome and did not affect data collection in the end. However, these different types of obstacles did highlight the often-unpredictable nature of the actual research process.

Analysing the data

As Yin (2009) argues the analysis of case study evidence does not follow fixed formulas but rather depends on the researcher's personal style of empirical thinking. Still, as Miles and Huberman (1999, p.10) point out, 'the strengths of qualitative data rest very centrally on the competence with which their analysis is carried out'. Although computer-assisted software packages can be particularly useful in helping to code and categorize large narrative texts, the researcher also needs to develop analytic strategies pertinent to the pre-set research questions and the specific aims of the empirical research. For the analysis of the primary qualitative data collected for this particular study thematic content analysis was employed, defined by Berg (2007, p.303-304) as the 'careful, detailed, systematic examination and interpretation of a particular body of material in an effort to identify patterns, themes, biases, and meanings' and accomplished by means of consistently applied 'criteria of selection'. With regards to the software tools, the analysis of primary data was conducted with the use of both qualitative data analysis software packages such as NVivo as well as through manual, 'paper and pencil' content analysis routines since the intention was to develop a very close relationship with the data and the relatively small number of the interview transcripts allowed to do so (n= 299 total number of pages). It should, also, be highlighted that all the digital files from the interviews were fully transcribed and - in the case of the Greek participants- translated into English by the researcher.

Content analysis was employed in this study and is said to be one of the most important research techniques in the social sciences. It 'views data as representations not of physical events but of texts, images, and expressions that are created to be seen, read, interpreted, and acted on for their meanings, and must therefore be analyzed with such uses in mind' (Krippendorff, 2004, p. xiii). Similarly, Mayring (2000, n.p.) sees qualitative content analysis as an 'approach of empirical, methodological controlled analysis of texts within their context of communication, following content analytical rules and step by step models, without rash quantification'.

For the analysis of the online artefacts such as forums, blogs and wikis content analysis was also employed, 'a technique often used to analyze transcripts of

asynchronous, computer mediated discussion groups in formal educational settings' (De Wever *et al.*, 2006, p. 6). At a first stage, these online artefacts were used for gathering quantitative data about levels of participation between the partner teams and across all participating schools. Still, these indicated the numbers of student contributions but were not indicative of the quality of postings, interactions and collaborative practices between the students and teachers. Therefore, content analysis was also adopted as a means of evaluating the quality and themes captured in those online artefacts.

In terms of analyzing the data arising from the in-depth interviews, the observation notes and the online artefacts the initial level of analysis consisted of some preliminary, general coding for the first sets of interviews such as in-and out-school ICT use, interest (or lack of) in the project, general difficulties, online communication and collaboration with partners. The transcripts were carefully read to gain an overall sense of the data and analysis began with the identification of emerging themes a process referred to as open coding that involves breaking down, comparing, conceptualizing, and categorizing data (Strauss and Corbin, 1990). This occurred after each phase of research visits so that subsequent interview schedules and observations could be informed by the findings from the preliminary analysis. Once data collection had been completed all the interview transcripts were selectively coded allowing a comparative analysis of the whole data-set.

Another emerging issue was that part of the data collection process involved partner schools in Italy, Germany and Denmark. All partner teachers used English to communicate and carry out the eTwinning project activities, therefore, this was also the language employed for contacting them and doing the email interviews. However, in the case of the Greek participants, the interviews were conducted in their native language since this resulted in enhancing the participants' engagement and understanding during the interview - especially since the language skills of the pupils that took part in the focus group interview differed substantially. The transcripts were then translated into English and back-translated into Greek to ensure validity and accurate representation of the participants' views. Additionally, as regards the Greek participants, the researcher had to apply for a formal permission to conduct research in the Greek schools granted by the national Ministry of Education.

Issues of Reliability, Validity and Generalisability

Other considerations pertinent to this research study were associated with issues of reliability, validity and generalisability. First, the concepts of validity and reliability are described in a wide range of terms in qualitative studies and as Winter argues (2000, p.1) they are 'rather a contingent construct, inescapably grounded in the processes and intentions of particular research methodologies and projects'. Other commentators, however, provide more fixed definitions of the concepts. Reliability is seen by Kirk and Miller (1986, p.20) as the 'degree to which the finding is independent of accidental circumstances of the research, and validity is the degree to which the finding is interpreted in a correct way'. In this sense, reliability is associated with consistency and validity with accuracy, thus, validity can assure reliability whereas reliability does not necessarily ensure validity. On the other hand, the generalisability of findings is seen to be related to the 'extent to which they may be applied to other cases, usually to a larger set that is the defined population from which a study's sample has been drawn' (Neuendorf, 1992, p. 12).

A key concern when conducting this case study research was to ensure reliability and validity and to bear in mind the limitations with regards to generalisability. However, the triangulation of data from class and online observations, focus groups and semi-structured interviews with the multiple informants, was seen to lend some authority to the evidence presented in this thesis and to allow for a certain degree of generalisability. According to Fielding and Fielding (1986, in Berg, 2007, p. 6-7) 'the important feature of triangulation is not the simple combination of different kinds of data but the attempt to relate them so as to counteract the threats to validity identified in each'. Additionally, as Yin (2003) argues although the case study findings cannot be generalised and applied to whole populations, neither can they be considered predictors of future situations, they can be transferred to other situations and organisations in order to help explaining phenomena.

Conclusion

This chapter has described and justified the research design, choice of methods and development of instruments as well as a range of methodological concerns underpinning this small-scale research project. It has attempted to present the

advantages but also the limitations of the multiple case study approach adopted - analysing the individual methods used for data collection and how these fit together with the researcher questions and the aim of this study. As such this chapter also provides a justification for the selected research methods and informs both the research strategy employed as well as the manner in which the practical implementation of each method was conducted. Because of the short-term and small-scale nature of this research project, the case studies might not be necessarily representative of the wide range of teachers that participate in eTwinning and the projects carried out, therefore, generalisable conclusions should not be drawn.

Chapter 6: The West Midlands case study

The school

The school was a mixed-gender, non-denominational, urban sixth form college located in the West Midlands near the centre of a large town with a mixed industrial and commercial base. The school was established in 1974 and during the academic year 2009-2010 there were 1,100 full-time students and some part-time students aged 16-19 years, mostly studying GCE AS and A-level programmes. The school's promotional material described the institution as having 'a friendly, personal approach and...[the] ability to maintain a high level of success for all its students' whilst the summary of grades awarded in the latest available Ofsted (2008) report was deemed 'satisfactory'.

There was some evidence of institutional use of web 2.0 applications on a school-wide basis. For example, an official school MySpace page as well as a Facebook group appeared on the school's website during the period of data collection (2009-2010). These were maintained and updated by a part-time member of ICT staff. Whilst the Facebook group numbered 372 members with some activity on its 'wall', on MySpace the school had a mere 49 'friends' with only two messages posted. The official school website also boasted a 'Head teacher's blog' with weekly update on news, events, exams and student success stories and achievements.

The school leadership appeared to have an ambivalent attitude towards the use of web 2.0 throughout the school. On one hand, the head teacher viewed her blog as a means of disseminating the college's news. On the other, key to creating and maintaining the Facebook webpage was a desire to control its content and the head teacher touched upon privacy and safety issues:

I'm not a fan of Facebook because I had a problem whereby one member staff had got lots of students as friends on their site...it just wasn't really that good so we advised staff not to use Facebook or at least not to use it and invite students to be able to access their pages so I had quite a negative introduction to Facebook if you like...we decided to do the Facebook site so that probably if I'm honest with you we have more control of the content than we would otherwise have (Head teacher, interview 1).

The school prided itself on maintaining links with other local educational establishments and the wider community as well as national organisations, such as volunteering programmes and other youth schemes. The school also maintained links with a number of European countries including Italy, Greece, Poland, Spain and Turkey within the framework of a Comenius programme. This involved exchange visits and aimed at enabling students to become accustomed with the cultural and traditional values of other European countries.

With regards to ICT, the school offered a range of extra-curricular seminars whilst the school's Moodle VLE was used by both students and staff and hosted information and resources for all courses as well as administrative documents and information. In terms of infrastructure, the school had a library and a computer centre both equipped with computers with access to the internet. As the head teacher explained her aim was to promote and enhance the use of the Moodle platform in the future:

We think the Moodle is a more effective way of, not only storing the information for staff but also for enabling a greater access...ideally what I'd like is every scheme of work that a teacher teaches to be online and when a student clicks on that scheme of work they can get the pre-reading, they can get the worksheets that have been handed in that lesson and they get some extension materials as well. And...outside of that we'd like some stuff on there for fun, just so that some people can get in there and access it and do a little bit of studying from home. (Head teacher, interview 1)

Still, the head teacher seemed to be aware of the challenges of implementing ICTs in teaching and learning and did not necessarily associate new tools with innovative practices, whilst she also acknowledged that within their limited budget she had to be cautious about how to invest in technologies.

I think [the use of ICTs] is a fantastic opportunity in the right hands... So actually, I'm quite happy for some staff to continue with the way that they teach and the strengths that they have but we constantly strive to open up their horizons...But sometimes in the wrong hands they are actually a waste of money if I'm honest with you... So, am I really pushing technology hard? The truth is, we're trying to nudge it along, we're not really pushing it frantically. (Head teacher, interview 1)



Figure 6.1: Midland's school

The eTwinning project: The Spartans

The eTwinning project commenced in the autumn 2009 with initially two Greek partner schools: an inner-city school in Athens and a small rural school in the north of Greece. My data collection was carried out during the academic year 2009-2010 and was organized in three consecutive visits. The focus of the project was ancient Sparta and the aim was to get students acquainted with the traditions and cultural elements of Sparta. This would be achieved by collecting, creating and sharing material online. The main tool used was TwinSpace, the official platform of eTwinning. Most of the TwinSpace tools such as the wiki, the blog and the forum were used for the project, although in practice most activity took place on the wiki. The language used was English, a first-language for all but one of the UK participating students and a second-language for the Greek students. The anticipated results of the project were broadly described by the teachers in terms of 'social interaction' through joint activities and collaboration (see table 6.1 below).

The Sparta project	
Subjects	Cross Curricular, Foreign Languages, History, History of Culture, Informatics / ICT
Language	English
Pupil's age	15-18
Tool's to be used	Chat, email
Aims	<ul style="list-style-type: none"> - To offer students knowledge on the Ancient Sparta tradition - To organize Sparta knowledge conceptually with the use of ICTs.
Work process	<ul style="list-style-type: none"> - Collect resources from the internet - Collect resources from e-Books - Digitalise photos - Exchange resources
Expected results	Social interaction which is seen an indispensable part of the learning process through joined activities, communication, collaboration and even through disagreeing. Students build their knowledge of the world by using the idea of the other or expand their horizons with the use of ICTs.

Table 6.1: The Sparta project (Source: Official eTwinning page of the project)

The UK participants

Two classes from the UK school worked on the project within the framework of the course on 'The Society and Politics Of Ancient Sparta' (n= 35 students). As the students described in the introductory PowerPoint presentation of their school and themselves, which was uploaded on TwinSpace:

'Although our class have only known each other for about two months now, we all get on really well as a class. We know each other quite well now and as a whole share one main interest – Ancient History. We all have different personalities but most of us come across during class time as fun loving and like to have a laugh – as well as being quite hard working' (students' PowerPoint presentation).

The co-ordinating teacher, Lucy, was a newly qualified teacher of Ancient history and this was her second year at the school. She registered on eTwinning in September 2009 and during the academic year 2009-2010 she built a network of thirty-three teachers across a range of eTwinning countries. She took part in an online workshop on 'Exploiting web 2.0 – eTwinning and collaboration' through eTwinning's Learning Lab. She also attended the national eTwinning conference in the UK where she was awarded a quality label for the Sparta project and took part in some of the on-going workshops there. In terms of ICT expertise she described herself as fairly experienced and confident:

They are ok, I'm not a computer genius but I can figure most things out...with the TwinSpace I had to work it out myself. (Lucy, interview 2)

The Greek partners

The idea for the project was originally conceived and initiated by Lucy who then looked for other partners through the eTwinning partner finding forum:

It was actually easier than I thought it would be...I just put the idea up that I wanted to do something on Sparta and then I had about four or five teachers interested. (Lucy, interview 1)

The first Greek partner school was a mixed-gender, non-denominational, inner-city, vocational upper-high school located in Athens and in terms of infrastructure, the school was equipped with three computer labs. There was a range of other projects running, such as environmental studies, health education and some cultural projects as well as another EU mobility programme for teachers in vocational education and training. Vasilis, the Greek teacher, was an experienced Mathematician and also the deputy head teacher of the school. He had a rather good command of the English language and was quite familiar with using computers. He was also a newcomer to eTwinning and his initial intention was:

...to find partners for a project on volunteerism within the framework of a health education programme...But we didn't get many replies for this topic... in our anxious attempt to find a partner and while we were running out of time and the deadline was approaching, I came across Lucy's message which was about the knowledge of history. And since we were running a cultural project on the Parthenon Marbles and in the framework of this project the students would be in touch with the Greek Ancient history, I thought of merging these two. (Vasilis, interview 1)

However, the Greek students from this school were never registered and did not take part in the project in the end. The only instances of participation of the Athenian school were some initial posts by the Greek teacher in November and a PowerPoint presentation. Some time before Christmas the Athenian school disappeared from the platform for reasons that will be presented in detail later on. As Lucy commented:

Originally yeah [there were two partner schools from Greece], but the Athenian school, I haven't heard from in months...because they've had problems with the students sit-in...and then they had swine flu and then we didn't hear from them again. (Lucy, interview 2)

The second partner school was a mixed-gender, non-denominational mainstream upper high school located in a small village in Northern Greece. In total two classes of thirty students aged 15-16 took part in the project. The PowerPoint presentation uploaded on TwinSpace provided rich background knowledge about the school's location and the surrounding areas as well as information on the participating

students such as their names, interests and hobbies and two group photographs of the classes. This was a relatively small school with just ninety students aged 16-18 with one computer lab, which was used by the eTwinning team on a weekly basis throughout the duration of the project. The school was not involved in any other collaborative project during the data collection school year.

Dimitra was a teacher of English in her late thirties and she had been working as a teacher since 2001 at various levels of state education ranging from primary schools to adult education. This was the first year she became involved in eTwinning and she described it as a 'totally exploratory' experience (Dimitra, email interview). Within a year after registering in eTwinning in September 2009 she had collated a contact list of twenty teachers and had taken part in eight projects. Two of these were 'starter' projects aiming to get beginner teachers acquainted with the eTwinning practices, try out activities and experiment with tools and meet other teachers. As she described:

It's my first year, but it wasn't my first project the one with Lucy, there had been a couple before that, they were for the newly registered teachers...so that they can get acquainted with eTwinning and gain hands on experience on how it works and so on. It was like, we as participants had to carry out some tasks which they asked, without us having to create the project. (Dimitra, email interview)

As a teacher of English, Dimitra had fluent command of the language, however, her ICT skills were less advanced so she often requested Lucy's help and often found the use of TwinSpace and the wiki problematic. However, as the academic year progressed she created a blog to post their eTwinning and other activities:

...as for the blog, it's not the blog where I'll post thoughts or anything but I use it as a tool to communicate with the kids and present some things we've been doing at school. I've started that and I am gradually shaping it. (Dimitra, email interview)

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Figure 6.2: Rural upper high school in Northern Greece

Drivers for participation and initial expectations

The teachers' initial decisions to get involved in eTwinning were based around expectations of what the project would offer to their students as well a curiosity to gain new experiences. As such, participation in eTwinning emerged as an organic and spontaneous initiative of the individual teachers and was not imposed by the school administration or other external actors. For example, Lucy's initial introduction to eTwinning took place during a meeting on the Comenius project that was running in her school and the following year she registered on the eTwinning platform and started organising her own project. In particular:

This is something that I wanted to do really because I've lived abroad for a lot of time and wanted to give them another perspective on things... last year when we taught ancient history, I just thought to an extent it was very dry cause...most of the coursework was reading source materials and things like that and I just wanted to give it a go and see if I could kind of add it in...to the curriculum and get away with it. (Lucy, interview 1)

Similarly, Dimitra had been previously aware of eTwinning from other colleagues and had also attended some relevant seminars organised by the eTwinning authorities. She wanted to get involved but she was only able to do it when she got transferred from an adult to an upper high school. What appealed to her mostly was

the opportunity it provided her students to use the English language by collaborating with another school and engaging in interdisciplinary activities. As she reasoned:

My subject area provides a good motivation for original participation and use of the language, to get to know students from another school and in particular when we collaborated with Lucy the fact that it's a British school, that the topic was relevant to the Greek history that pupils are taught. (Dimitra, email interview)

It was, therefore, the personal curiosity of the teachers who brought eTwinning into their schools and they then informed their colleagues and their head teacher about their activities. Still, although they did not collaborate with other colleagues for the eTwinning project, they did have the support of their head teacher who encouraged participation in such initiatives. Additionally, they had been given sufficient access to the school's computer lab and library and no relevant problems were reported. As Dimitra explained:

We didn't have any problems with the head teacher or with the curriculum. We are a small school so it wasn't like the lab was occupied by others and we couldn't use it. (Dimitra, email interview)

Additionally, the head teacher of the Midlands school appeared to appreciate Lucy's extra work and acknowledged the impact of the project at school level. As can be seen from the excerpt below she was quite pleased that their school had been picked out as an example of good practice:

eTwinning is a fantastic initiative and that was Lucy's initiative. It wasn't driven by SMT or any manager in the college, Lucy just did that, which is fantastic. And now we find ourselves in an area of good practice because of Lucy which is excellent as well...I would like to think that staff would know that I'd welcome those kind of initiatives and Lucy's been on a course on her own time at the weekend, if you can take time off then you're welcome to it if you can manage it. (Head teacher, interview 1)

Other expected benefits from the participation in eTwinning and other EU mobility related programmes at meso-level were associated with broader notions of modernising the school:

Well, as I was appointed deputy head teacher this year, I wanted to do something to modernise our school and participate in more EU programmes such Leonardo and the other mobility programmes...so I also had eTwinning in mind. (Vasilis, interview 1)

At macro level, Lucy as a newcomer to eTwinning was offered a range of stimuli throughout the year that shaped her overall experience and activity. First, upon the completion of her first project she was 'head-hunted' and contacted by the British Council and the BBC World Class and this resulted in a second short term project,

the 'Rosetta Stone'. Then she was invited to the national eTwinning conference in the UK where she was awarded a quality label for the Sparta project and had the chance to take part in some of the on-going workshops. Last, she was asked to become the eTwinning ambassador for West Midlands. In this sense, there appeared to be some 'formal' appreciation of Lucy's effort and it can be argued that these drivers stemming from macro-level actors had an effect on the individual teacher at micro-level in terms of motivation as well as on the school at macro-level in terms of accreditation and profiling the institution as an example of 'good practice'.

Participation and expectations: pupils' perspectives

The initiation of this eTwinning project was a teacher decision and student participation was either compulsory if implemented in the curriculum during class time or otherwise students took part voluntarily. In the case of the Athenian school the project was designed to take place as an extra-curricular activity whilst in the UK and the rural Greek schools, eTwinning was implemented in the Ancient History and EFL courses respectively. Class time was devoted at several occasions on the project, while additional personal work was assigned as homework. In both schools although participation was compulsory, the project did not form part of the students' assessment and as a result motivation and engagement ranged:

I guess it was more the fact that because we had to do it, it was a class thing and quite a lot of people didn't actually want to it whereas some other people were more motivated than others. (Ada, 16, Midlands)

During the initial stages of the project the majority of UK students were enthusiastic with the prospect of communicating and collaborating with the Greek school. As Lucy described:

They had absolutely no idea at all about Greece...the country and what it's all about and the region that these students are from so one of the most interesting things for them was having a look at the PowerPoint that was sent by the Greek students to us about their school and the surrounding area, like, they have an ostrich farm up there and things like that and they were, like, 'oh my God, they have an ostrich farm, oh look at that, look at the mountains and look at this' and it just really kind of sparked their interest! (Lucy, interview 2)

As such, a large number of students were eager to take part since the project offered the element of surprise and it was seen as an escape from the boredom of the daily classroom routine.

I think because it was new to us the majority of our class liked the challenge of doing something different and new so although it was quite strange to us we did quite enjoy, I mean, to do something different. (Ada, 16, Midlands)

When we heard about it we just sort of, like, we thought that we would talk with this school in Greece and it did sound a lot more interesting. (Greg, 16, Midlands)

We got really excited, we thought 'oh my God, we are going to be talking to Greeks in school', we never did. (Lauren, 17, Midlands)

In this sense, the motivation for many students was not so much using computers but the prospect of communication with a different school in another country. However, there were other students who expressed indifference or dismissed the idea from the very beginning:

Interesting to do as an idea but I didn't really do that...I wasn't involved in it practically and I'm not sure, I just know I didn't get round to doing that much...it hasn't interested me that much. (Jude, 16, Midlands)

It just wasn't my sort of thing. I wouldn't ever do something like that if it was my choice. (James, 16, Midlands)

The tools

The project was hosted on TwinSpace, the eTwinning's official project-hosting tool and no other external tools were employed. The eTwinning documentations described TwinSpace as a multilingual, virtual classroom, designed specifically for eTwinning projects that can be used as an online platform to host all the documents and activities of each project. In particular, TwinSpace consisted of the Project Activities section, the Staff Room, the Pupils Corner, a Chat and a general guidelines section. Another said benefit of using TwinSpace was associated with e-safety and school filtering systems that can make the use of other external tools more challenging for teachers. As Lucy described:

I think the eTwinning platform is OK, it's a little bit basic...but I think it does the job for what it needs to do. (Lucy, interview 3)

Once the teachers agreed to collaborate, the initial steps of setting up the project involved a bureaucratic process of submitting an application to the relevant eTwinning authority in each country, getting approval for the project and being allocated their own TwinSpace. Of course, the nature of the projects' TwinSpace use depended on teacher (re) configuration. In this case, once the project was launched,

the teachers mainly used the TwinSpace blog to communicate, arrange any practicalities, seek help or advice and keep in touch.

We did some emailing but there's also the staffroom...it's like a forum, there's a blog there, we've been mostly posting blogs to each other, so you can see what kind of communication was going on... (Lucy, interview 1)

Lucy was not only the project founder but also the more tech-savvy of the teachers and this was reflected on the use of the blog. For example, Dimitra at first seemed unfamiliar with blogging practices and rather than use the 'comment' feature to reply to Lucy, she instead created new entries and used the blog to ask for Lucy's help on practical issues such as student registration and access to the TwinSpace site.

Another feature of TwinSpace was the Pupils Corner (figure 6.3) where students could store documents and use the forum for group discussions. Although Lucy encouraged the students to post on the forum, it was not particularly popular and there was minimal student participation.

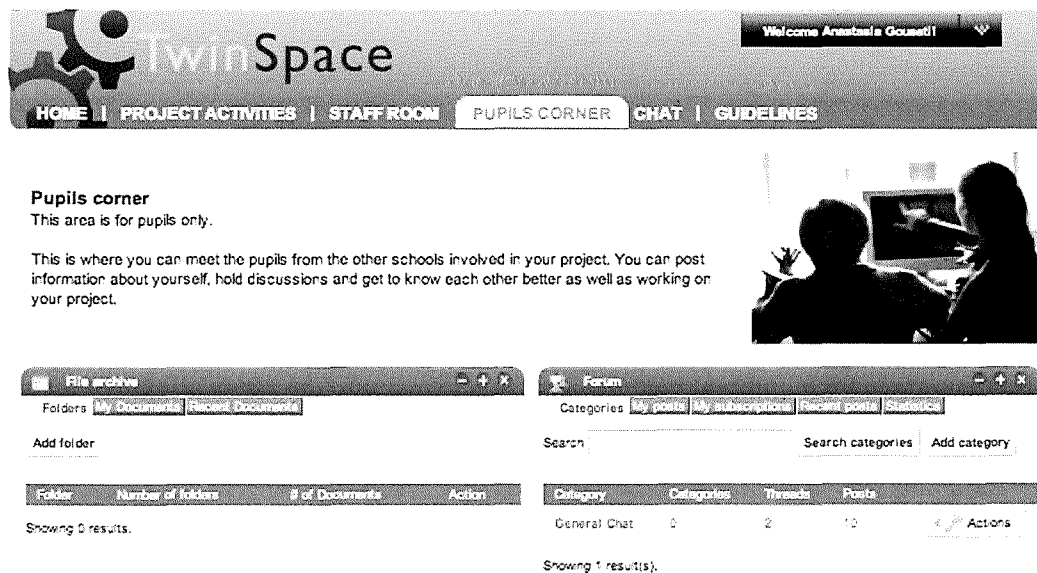


Figure 6.3: Screenshot of the Pupils Corner on TwinSpace

The Project Activities tab (figure 6.4) allowed teachers to configure the structure of the project and add or delete 'activities' to their TwinSpace according to their needs. They could also decide on the particular tools they would use for each activity, selecting amongst a forum, a file archive, an image gallery, a blog or a wiki.

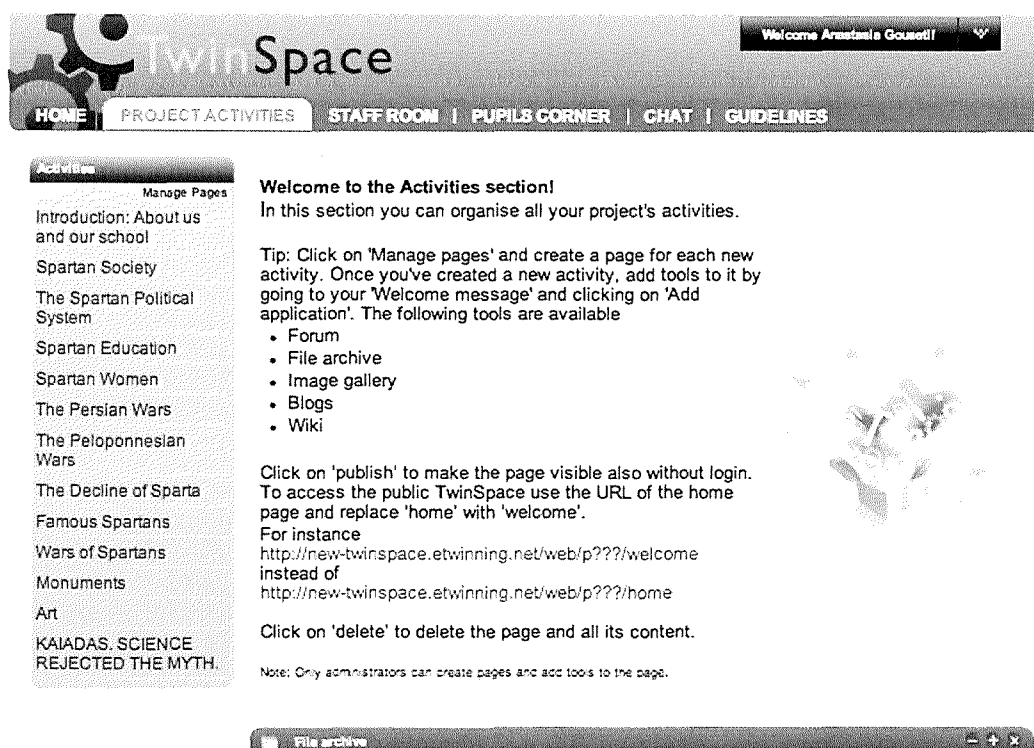

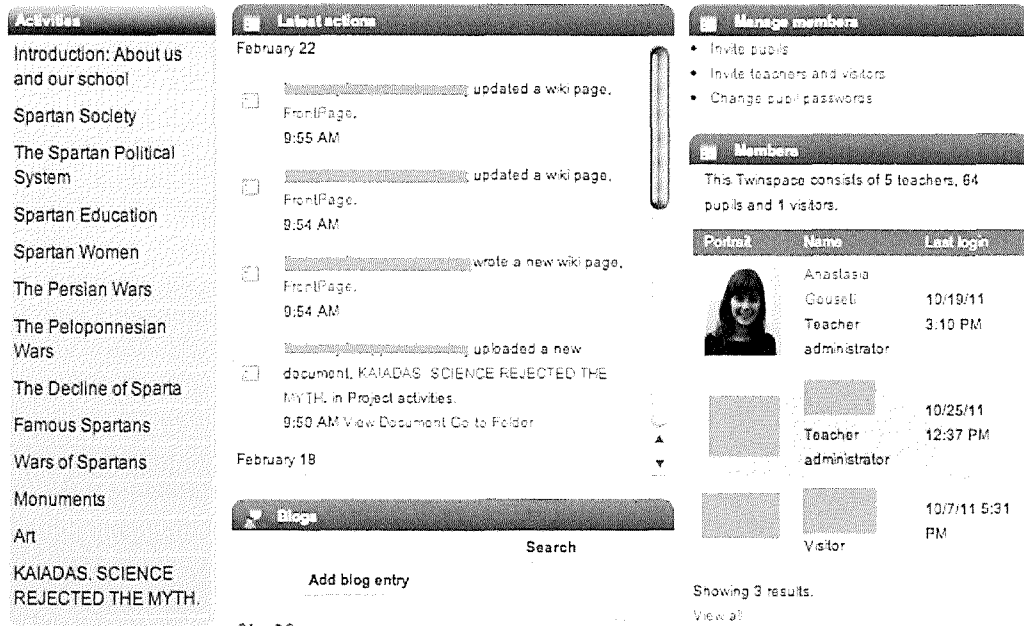


Figure 6.4: Screenshot of the Pupils Corner on TwinSpace

The ‘heart’ of this particular TwinSpace and the ‘busiest’ tab in terms of activity was the ‘home’ page (figure 6.5). There, one could find all the different sub-topics the students worked on, explore the recent activity of others, post or reply to an introductory/welcoming message on the blog, go through the list of all the participants, and use the email tool or the calendar. Additionally, teachers could manage project members by inviting pupils or other teachers and visitors to join, and also change pupil passwords. The Chat tab opened in a separate window and had the very basic properties of a chat while the Guidelines tab re-directed users to the main eTwinning site where detail instructions and advice could be found.

Ανακάλυψη της ιστορίας με τη χρήση ΤΠΕ

Public link to this TwinSpace: <http://new.twin-space.eu/twinning-net/webid18537>Twinning 





Portrait	Name	Last login
	Anastasia Gouseli Teacher administrator	10/19/11 3:10 PM
	Teacher administrator	10/25/11 12:37 PM
	Visitor	10/7/11 5:31 PM

Figure 6.5: Screenshot of the project's 'Home page' on TwinSpace

The students were divided in pairs or groups of threes and worked on the different sub-topics related to Sparta. As Lucy explained:

What I did with the two classes, was I tried to put similar abilities together, so you have the higher ability students together and the lower ability students and then I gave the lower ability students the easier topics with the idea that they would at least do something but what I did, knowing that some of them were extremely lazy and others are just not very bright, was that across the two groups, if I had one group that I knew was a bit lazy I'd put a more hard working group from the other class on it, so I knew that at the end there would be something there. From one of the groups, they would do something! (Lucy, interview 1)

By clicking on the 'activities' bar on the left-hand side of the page you were directed to the various sub-topics the students worked on. Most of the work was posted on the wiki, which could be used either in Creole or HTML format. Examples of the wiki in these two edit modes can be found in appendices 4 and 5.

The journey: implementation of the project in practice

Technical inhibitors

While the Athenian school was affected by long and disruptive school closures, the project continued with the other two teams, and Lucy and Dimitra used the teacher's blog to arrange the practicalities. In theory, once teachers registered their students

and provided them with usernames and passwords, the students could then access the platform either from school or home. In practice, however, this use of TwinSpace was not without problems. As Lucy described:

It looked like the perfect platform until it all started crashing!...I registered all the students and then only about five or six could actually get on so we had to de-register them and re-register them so we spent a lot of time doing that... Well, I just got at a stage where I said I'll just take them off and put them back on the system and it worked the second time round... Each time I emailed them [the National Support Service] but the bad thing about them is that they would get back to me about a month later and by then I had figured it out by myself. (Lucy, interview 1)

Dimitra also faced difficulties with registering the students and as she was not that technically experienced or confident she sought help from both the National Support Service (NSS) and Lucy. At first, she posted a blog query on how to register the students but when registration problems persisted she emailed the NSS requesting assistance. As she commented:

Well, to tell you the truth I mainly talked with Lucy and she gave me some tips on things she had already learned or understood herself. The NSS did reply after some days but they didn't give me a substantial or helpful answer...they didn't say anything about why this happened or how we could change it or anything...They told me that I had to wait some more because I hadn't received the authentication or whatever. Indeed, I did wait a couple of days and I was approved and I could access the platform. (Dimitra, email interview)

Until the very end of the project some students from both teams were not able to log on the platform at all and the teachers reported eventually having given up on registering and re-registering them. Another issue was that once the students received their passwords, they often forgot and/or lost them and the teachers would then have to repeat the process of taking them off the platform and re-registering them in order to get them a new password. For others, the password may have worked at school but not at home if the computer configuration settings differed. Additionally, some students complained that the TwinSpace website URL was too long and that this would deter them from accessing the platform - especially from home. All these perceived and experienced technical difficulties often resulted in student frustration:

Mike (16): The account system didn't work.

Jude (16): And there were these really complex passwords.

Int: Couldn't you change them?

Mike (16): No. Which was annoying. You had all these letters which was ridiculous to remember, it just made it more time consuming.

Int: Did that put you off?

Mike (16): Yeah, especially at home because you think 'I've no idea' and you want to kick the service system.

Int: Did it also have a long web link?

Mike (16): Yeah, www.dosomework.com/eu/hdlksj?

These experienced technical difficulties also resulted in the loss of valuable class time for solving these problems, rather than working on the actual project or collaborating with the partner school. As Lucy explained:

I think I've had two sessions here [at school] but I've a spent a lot of time actually re-registering the students, getting online, they've had two-hour long sessions here during class time but mostly they are supposed to go on it at home. (Lucy, interview 1).

Wikis and blogs: students' (un)familiarity with the tools

Apart from these technical difficulties associated with accessing TwinSpace, very few of the UK students were familiar with wiki tools (above and beyond reading articles on Wikipedia), and only one out of the thirty-five English students had any prior experience using a wiki. Similarly, although the students were more familiar with the concept of a blog, only a small minority had read a blog in the past and none of them had actually created a blog or contributed to one. Therefore, a large number of students appeared confused at the beginning of the project both as regards using the tools but also as to what their particular aims and tasks were. From a 'scaffolded' pedagogic point of view, Lucy selected the topic, created the subcategories and allocated these to the students so that one team from each class would be working on each subcategory. The technical features of the TwinSpace and the wiki and blog tools were introduced to the students at the beginning of the project, however, she gave them the flexibility to decide how to organize the material and how to use the tools.

I kind of have left it up to my students, the idea was kind of they could decide which way they wanted to organise it...with the idea that they would actually collaborate and work...but they are just lazy so they didn't. [But] they are having trouble trying to figure out where to put all the information to begin with they were just filling up the blog and I thought 'oh stop' so I'm going to suggest to them that maybe they try using the wiki to actually do their different things and see if that works. (Lucy, interview 1)

This freedom and flexibility, however, was interpreted by the students as lack of organisation and guidance which did not chime with the everyday learning and

working experiences they were accustomed to. As the excerpts below demonstrate, a large number of students did not welcome this unexpected and unfamiliar sense of freedom:

Ned (18): There was no real direction to it, there was just 'here's the website, work' so there was no being told what to do really.

Penny (16): Yeah, it wasn't very structured, I think, there was a deadline but there wasn't really much structure.

Jude (16): It just needed to be more organised really...It was a mess.

Beatrice (17): Nobody knew...we didn't know what we were doing.

Students' in- and out-of-school use of ICTs

This first case study did not reveal any types of exemplary in- or out-of-school use of ICTs. Overall, the majority of the thirty-five UK students that took part did indeed use computers and the internet almost on a daily basis either for school homework or for recreational reasons whilst a smaller minority reported using the computer at home once a week or less either due to lack of internet access or because they preferred engaging in other offline activities. The excerpts below mirror the majority of students' experiences as regards out-of-school computer use:

I use computers daily for school work and kind of enjoyment purposes and yeah, like, it can be something helpful where I can look what's happening at the cinema, it's a good way to contact friends and keep in touch with other people. (Kim, 17)

I use mine daily just for keeping in touch and contact friends and doing all my homework on it and stuff like that. (Megan, 16)

Recreational activities mainly consisted of using Facebook and/or MSN, listening to music and to a lesser extent downloading music and films, playing games and accessing a range of websites either for news updates or for entertainment. As regards in-school use of ICTs, apart from the eTwinning project the students reported only using the computer lab as part of their ICT school subject. With regards to school work, students' sporadic use of digital technologies was restricted to 'doing research' which largely involved using the Google search engine and Wikipedia to look up –and often copy– information, as well as typing homework on Word and creating PowerPoint presentations. Moreover, students reported that they

often used the school's Moodle website to access resources and check their school email account.

Well, sometimes we use them [computers] to, like, get resources off Moodle. Like, make presentations for lessons and we have to get information off the internet. (Neil, 16)

Only two students out of thirty-five reported more sophisticated uses of ICTs and the internet and a more in-depth engagement with online activities. James (16) had edited existing entries or 'the odd article in Wikipedia' to use his words but he had not created any new entries from scratch whereas Tristan (17) used his computer to 'design stuff' related to his hobby, skating.

I have a computer, I use mine for, like, design stuff, I go everyday and just design stuff and talk to people in a general sense...Mainly [I use] Photoshop and stuff like that and all sort of different programmes to, like, design stuff...When I want to share it I put it on Facebook or I've got, like, a little skating website thing I put pictures on or I just use it a general kind of personal thing to put different stuff up. (Tristan, 17)

Although some students did find TwinSpace and the various tools rather difficult to use at first, the majority reported that with the support of Lucy they managed to overcome most of the technical problems and they 'got the hang of it' (Rita, 17).

We sort of had to be told how to use it because it wasn't very obvious but once you took on the instructions it was very easy to sort of follow and add stuff to it. (Megan, 16)

I don't think I had any real difficulty, I picked it up pretty quickly, I mean I was just orientating myself around the website and once I had gotten got used to it, it was pretty simple to use really. (Andy, 17)

Although students felt confident to engage with the tools, they often found the operation of TwinSpace problematic whilst they described how the plethora of tools and tabs was often confusing and make navigation more complex.

I think it was a bit too technical for, like, cause Lucy is talking about how you can add different files to it but none of us really did that, it was too technical. It didn't need to be that technical! It would have been better if we just posted things and they posted things, we didn't need all these...extra files and extras...It was like a jigsaw... (Lauren, 17)

Yeah, it was a bit like a jigsaw. (Greg, 16)

On the other hand, a minority of students admitted that they did not make great use of the wiki since they never really understood how it worked and they were not willing to experiment though 'trial and error' like some of their classmates did:

I had no idea how to do that wiki thing, it was explained but I still didn't quite grasp it. (Henry, 17)

I'm just rubbish so I don't get it at all. (Phoebe, 19)

I just can't use it, I need help. (Penny, 16)

As regards the Greek team, participation was more limited and restricted to a smaller number of students. When Dimitra was initially asked about her students' ICT skills she commended:

No, the students don't have problems with using computers, they're always on Facebook [laughing]. Well, the students are all day online, they didn't have a problem with that, the problem was with the passwords. (Dimitra, email interview)

However, extended and frequent engagement with social networking sites such as Facebook did not necessarily guarantee that students had the adequate skills to use more unfamiliar tools such as TwinSpace or the wiki effectively. This was enhanced by Dimitra's own limited experience which resulted in inadequate student training and guidance from her part. As she described:

They did [face technical difficulties], well, I also faced technical difficulties, when I started in September or October and I came across the word wiki, I didn't know what a wiki was. Also, in these starter projects I did ...they presented on each weekly task a different eTwinning tool so...I started becoming acquainted with what it is and how it works. But also the students themselves faced problems, like, 'Miss, so where do we upload this now?', 'where shall we click on?', 'how do we do it?'...And because I still don't know how to use the wiki well, it was difficult to guide the students on that, how to work on that and so on. (Dimitra, email interview)

Students' use of and engagement with the TwinSpace tools

The result of these technical difficulties, lack of know-how and limited teacher guidance was that students experimented with the tools and often posted randomly on the wiki and blog. Some of the teams used the wiki to create their history-related entries whilst they posted short introductions about themselves on their team's blog. The wiki was frequently perceived, thus, as the formal 'educational' space where students uploaded text and images relating to their allocated sub-topic. On the other hand, they used the blog in a more informal context either to introduce themselves, or to do some 'housekeeping'. There were cases where confusion prevailed since some students posted on the wiki and others on the blog and there was a lack of direction and communication amongst them. During one of the class observations, Lucy encouraged her students to use the wiki to create their team project and move everything from the blog or the uploaded files archive.

One of the most active students from the Midlands school, Megan (16), not only deleted the blog posts and created wiki entries but also encouraged her 'team' to

post more, gave them advice on how to do so on the wiki and informed the authors of the deleted blog posts (see figure 6.6). As she commented:

I've been sort of the person in my group who's been organising it, sort of putting subheadings for other people to add work to and it's good to sort of see the Greek sort of keep adding work there as well... I think I put myself forward and then we sort of keep adding things and just going along. (Megan, 16)

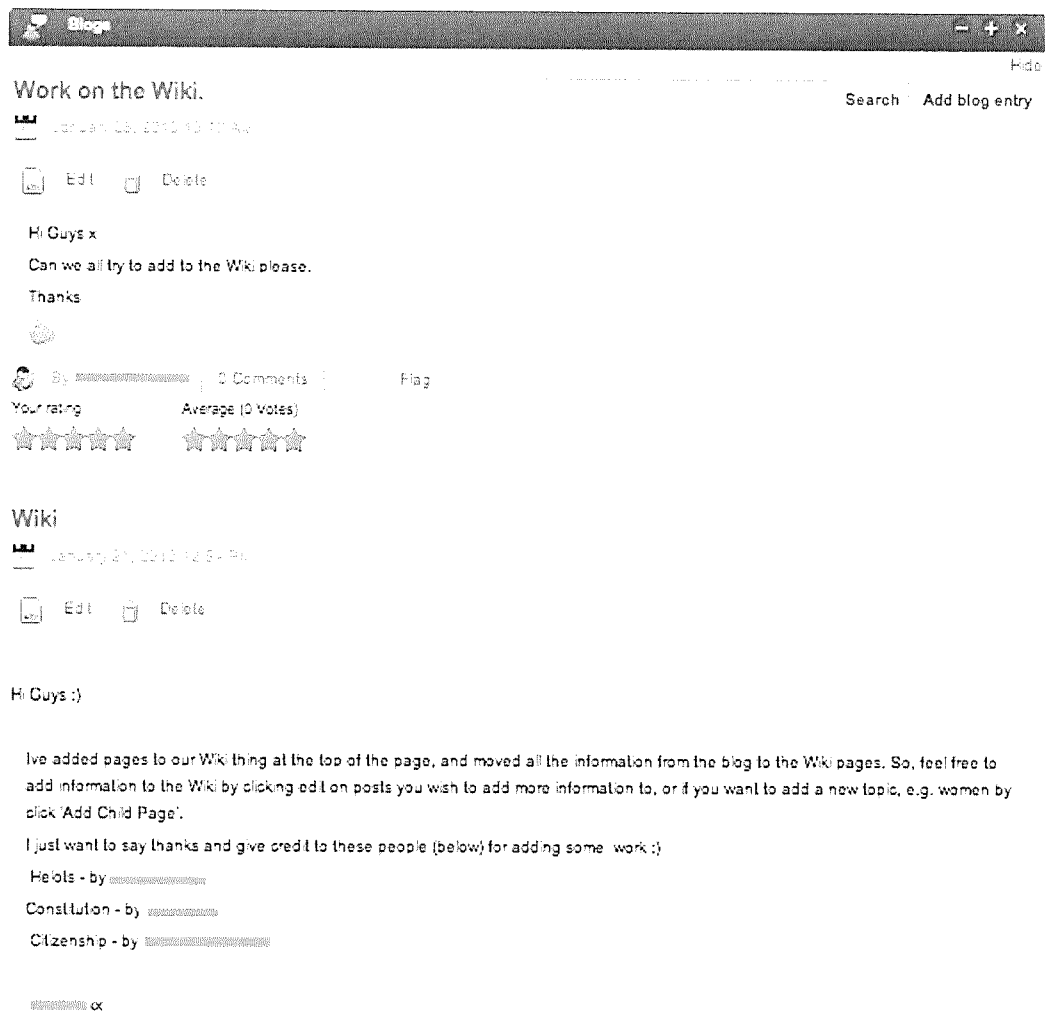


Figure 6.6: Screenshot of blog posts by Megan

Additionally, this team's earlier blog posts highlight how students drew distinguishable barriers between formal school work for which they use black fonts on the wiki and other more informal blog posts where some of them experiment with colours and emoticons (see figure 6.7).



Figure 6.7: Screenshot of student blog entries

Editing others' work

The common practice amongst most student pairs or groups was that they discussed their allocated sub-topic and divided it in smaller sections for each team member to work on. Then they either logged on TwinSpace individually and posted their work or they assigned one team member to upload it online, especially in the few cases where somebody faced access problems and could not log on the platform. While this 'proxy' use often felt to work well, there were a few cases of students who complained that they have taken on all the work themselves. Additionally, there were a few students who admitted that their contribution to the project mainly consisted of copying and pasting content on the wiki. These different approaches are highlighted in the following excerpts:

We tried to do it like in college so we could all fit there and do it together so one of us would be on one computer finding information, the other would be putting it in on the website. (Jenny, 17)

I did Persian wars with Robyn. We both did some pretty good work. But we just basically copied it, just put it up but it looked good, it looked proper good. We didn't have any Greek people. We were supposed to be part of two groups but they never showed. (Mike, 16)

While students felt comfortable to publish their work on TwinSpace and share it with their partners, very few edited their own team's or the other teams' wiki entries.

This was, first, justified by their lack of experience in using a wiki and their unawareness of the editing properties of the tool. During the focus group interviews, it was clear that only a small minority of the English students was aware that they could work collaboratively on the wiki and edit each others' work in order to create a joint entry. The students mainly used the wiki as a webpage where they would only add work to, and in particular, they thought they could only post on the specific section they had been assigned:

Kim (17): Eh...you can only add work to it, to the section that you've been designated...

Int: Can't you comment?

Megan (16): We haven't been told that we can so we haven't sort of tried it.

Kim (17): We are kind of in the process to exploring it ourselves.

A few students appeared aware of the editing properties of the wiki, and there were a few instances where students described how they had edited somebody else's work either in their team or in a different team. However, these were restricted to minor editing of spelling mistakes or moving pictures around:

I can't remember [what we edited] but I think it wasn't major things, it was, just like, spelling mistakes and, like, put a name on somewhere so we logged on it and edited other people's work and stuff. Actually it seems pretty bad now [laughing]. (Sheila, 16)

I edited one of the posts they put up actually...em...those were just a bunch of pictures and so I moved them from one place to another because they wouldn't...they weren't needed to everyone. (Tristan, 17)

The interviews revealed one interesting - but atypical – instance of editing. Whilst a large number of students admitted that their main contribution to the project was copying and pasting information on the wiki from other online resources with or without editing the text beforehand, Jill took advantage of the editing properties of the wiki to set this right.

We did edit some text [laughing] cause they just copied and pasted everything so we were like 'this is wrong' [laughing] so we just changed it. (Jackie, 17)

Another emerging issue was that once the students were informed in the interviews about the editing properties of the wiki tool, they appeared rather sceptical and reluctant to engage in such practices:

I think I'd rather left other's work alone. (James, 16)

Yeah, I wouldn't mess with someone else's work. (Helen, 17)

I don't know, probably not [edit somebody's work]. I might point out to them rather than just changing it myself. (Jenny, 17)

The Greek teacher and students also mainly added content to the wiki and did not take advantage of the editing properties of the tool. Although Dimitra was aware of the editing feature she found the wiki particularly hard to use and she could not guide her students towards this direction. The excerpt below mirrored their rather chaotic and unstructured use of the different tools:

No, there was no editing. As I said they didn't use the wiki exclusively, they also posted on the blog or the forum, we used it...how can I put it...we didn't have a plan in mind that 'this had to be posted in this section, this has to be posted in the other section'. The students posted wherever they could and wherever they figured out how to do it, or where I showed them how to do it. (Dimitra, email interview)

Thus, the practices that the students adopted when engaging with the wiki reflected the broader discourses of their formal education experiences where they were not used to working collaboratively to produce written context. As such the wiki was mostly used to gather factual information – resembling at large an online 'notebook' of individually assorted content. Although the project was not assessed and the students were given complete freedom to work however they wanted, this clashed with the common practices that pervade school norms, and only a few students took advantage of it - though to a minimal degree. In the absence of clear guidelines, the students seemed to have imported the school practices they were familiar with.

Copying and pasting: the Wikipedia example.

The majority of students who took part in the project used online resources to research their topic and a smaller number mentioned using library books, textbooks or their personal notes. During the class observations the common practice was that the students made use of either the Google search machine or the website 'about.com' to research their topic and used the top hit pages for their written work. As the following excerpts denote, students imported familiar 'copying and pasting' homework practices, particularly since the project was not assessed. Additionally, although Lucy felt disappointed with some of her students for not putting serious effort in their project work, she also expressed some degree of leniency towards Wikipedia and a degree of compromise since the project was not formally assessed.

I don't like Wikipedia very much. We try to keep them away from things like Wikipedia but actually the stuff on Ancient Greece on Wikipedia is actually quite good, it's not too awfully incorrect so I don't mind as long as they are using other sources as well. (Lucy)

Similarly, the Greek students mainly copied and pasted from online resources and Dimitra not only was aware of it but did not object as she had to cope with her students' language problems and she could not push them very hard for fear they would get discouraged and totally give up on the project.

We did the same [copying and pasting] but our problem is that we don't understand everything that's on Wikipedia [chuckling], you see, that was an issue. (Dimitra, email interview)

However, this encouraged the English students to continue the 'copying and pasting' patterns of working on the project. Lucy had to struggle to convince them that this was not acceptable in her class and argued against students' complaints that 'the Greeks have only done this'. Additionally, she acknowledged that:

After all they're human and human beings will look for the easiest option. It's because they can copy and paste and it's, you know, it's the answer, so what's the problem, they don't realise that they are not really learning anything by just copying and pasting and not working their way through it. (Lucy)

Students' perceptions of using Wikipedia and similar online resources appeared to be rather mixed. Their understanding of 'research' at large involved internet searches to look up information for school-related assignments whilst the majority admitted using Wikipedia frequently, albeit with a feeling of guilt. The following interview excerpt reflected clashing student sentiments: on one hand they perceived Wikipedia as 'unreliable' but on the other hand they admitted they were too lazy to do research and homework differently.

Helen (17): We are, like, told not to use Wikipedia.

James (16): Wikipedia is very suspect, if it's source checked and it's not citations then it's generally reliable but a lot of it is just from people's memories.

Int: And you said, you're told to avoid Wikipedia.

Helen (17): Yeah, especially when we do most college work cause it's supposed to be not very reliable.

Int: Do you agree with that?

Helen (17): I generally use it. And most people do.

James (16): It's reasonable as an overview of what you need to do rather than definitely use it as your ultimate source thing.

Int: Then why did you copy and paste everything off it for the project?

James (16): Because I was lazy.

Conversely, a small minority of students were against copying and pasting and used books and other online resources, arguing that Wikipedia was not reliable:

Andy (17): [I used] different websites, library, books, textbooks.

Lauryl (16): I always use the BBC history website cause it's written by expert professors and that and people actually know that on Wikipedia anyone can edit information, so you don't know what you're getting and if it's accurate.

Andy (17): Yeah, I don't think Wikipedia is too reliable either. I just when I use the computer go to sites like the BBC.

Student 'copying and pasting' practices with regards to Wikipedia mirrored their general patterns of engaging with homework. As can be seen from the following wiki screenshots (figures 6.8, 6.9, 6.10, 6.11), three major practices can be identified: i) copying and pasting in bulk without even removing the hyperlinks that re-direct to the original webpage, ii) copying and pasting after having removed hyperlinks and sometimes having 'changed the difficult words' (Mike, 16) iii) using websites for guidance and then writing up the wiki entry 'in your own words' (Lauren, 17). This last practice might have involved adding pictures and making more creative use of the wiki or uploading text-only entries.

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Figure 6.8: Screenshot of plagiarised wiki entry (with original photos and hyperlinks)



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Figure 6.11: Screenshot of original wiki entry (experimenting with other features)

Collaboration and communication: from enthusiasm to disappointment

Drawing on both class observation and interview data, there were very few, if any, instances of collaboration either between the Greek and UK teams or the teams across the two different classes that took part. During the class observations at the school's library the students sat around one or two computers and worked on the project together by taking turns on the computer. There was also a small minority of students who appeared totally uninterested and disengaged with their teammates and simply watched them working on the computer without making any contributions.

As one student commented:

I've barely really looked at my group's work, I mean luckily we've split the work in the middle but there's still no communication, we'll do our bit, they'll do their bit and then we'll put it together and that'll be that. (Ned, 18)

The very few instances of small collaboration on the wiki consisted mainly of posting questions and checking out each other's work before adding more content.

As the student below described:

Well, we asked questions a lot. So we'd put our information and then they'd put their information and they kind of changed it sort of thing and then...a lot of it was the same but a lot of it was quite different. (Lauryl, 16)

Students mainly associated communication and collaboration with synchronous online interaction such as chatting as opposed to using other tools such as the TwinSpace blog or wiki. However, the teams were unable to use the chat due to time and curriculum impediments. Classes at the Greek school finished at 13:40 whilst Lucy's earliest class was scheduled for 11:15. When taking into consideration the two-hour time difference between Greece and the UK this meant that they could only be both online for maximum twenty minutes and this could only work with one out of the two participating classes. During one of the class observations the teachers had arranged their first online meeting, however, by the time Lucy took her students to the library and logged on to TwinSpace the Greek students had left. As Dimitra commented:

There was a time issue, both with the different time zones and with the school timetable. The hours that Lucy was available were after 13:00 but the school in Greece finishes at 13:30 and there are buses that wait for the children to take them back home to their villages so they couldn't stay longer. So there was no online common presence not even on the chat so that they could break the ice in the beginning... We tried to once, we were logged in and thought we would manage to have fifteen minutes on the chat but I think they were a bit late and because the buses depart at 13:40 the children said at 13:30 'well, miss, we are logging out and switching off the computers' so we were left disappointed. We didn't manage to chat. (Dimitra, email interview)

Some of the students seemed to be aware of the practicalities that prevented them from using the chat and as they explained:

I think because of the time difference and because our Christmas holiday came while they were still at school and their Christmas holiday came after we got back so there's been very little time that we've been together at the same time. (Ned, 18)

Curriculum and time pressures were seen by Lucy as inhibitors to creativity since in the end they did not have adequate time to invest to being more resourceful and innovative:

The project...had to be focused on what we were doing which meant there wasn't as much room for creativity and it was, like, really dull (Lucy, interview 1 and 3)

Lack of synchronous online interaction at large resulted in disappointment and student motivation and interest in the project waned as their expectations were not met:

Int: What did you expect at first?

Lauren (17): To, like, actually talk to people.

Jackie (17): Yeah, and maybe like a bit of conversation or something.

Lauren (17): But we were never online at the same thing.

Henry (17): It was supposed to be this big thing and it ended being nothing really, just, posting stuff, every now and again.

When asked about what disappointed them most as regards the project the very first thing all students mention was lack of communication which had been their main motivation in getting engaged with the project:

It's good working in groups sometimes, like, working with people in a different country is quite interesting as well...we haven't had that much contact with them so sometimes it's boring. (Penny, 16)

I think the idea is really good and it should have been fun but I think that because the Greek students were never on at the same time there was no real collaboration between the two so you couldn't really work with the other school. (Henry, 17)

On the other hand, asynchronous interaction on the TwinSpace forum did not appeal to the majority of the students since it seemed to fall outside their everyday out-of-school online social practices such as chatting and instant messaging. Migrating from MSN and Facebook and using the TwinSpace chat was something they could more easily grasp compared to a forum. This resulted in very low participation as these students described:

I just don't think it occurred to us either, well, me personally, I thought that was, like, our work that it'll do to introduce ourselves, that we post some stuff about the work and stuff as well rather than...do you know what I mean? (Sheila, 16)

We've got a forum where we can post questions, many people, I mean they're a bit nervous to ask questions so each on their own aren't bothered about asking questions so it's just really participation is a bit low, we'd rather just get the work done, put it up there and then that's that (Ned, 18)

Everyone was, like, really shy because no one had posted and you didn't want to be the first one. (Jackie, 17)

Some other students also commented on how using the chat was 'easier' for them and also '...it was instant, it was more like what you're used to if you can talk to them straight away, I think that was why [we didn't use the forum]' (Sheila, 16). Additionally, the lack of Greek response was another factor that put off the minority of the students who tried to start a discussion on the forum. Only eight out of the sixty-five students used it resulting in merely two threads with ten posts in total (one Greek and seven English students posted). The messages posted were brief and included general 'hellos' and 'how is everybody', however, the use of emoticons

and various colours did denote an attempt to set a friendly tone and 'break the ice'. There was only one instance in the forum, which is interesting to look at because it revealed student initiative and falls outside the prevailing 'why bother' attitude (see figure 6.12).



Figure 6.12: Screenshot of forum posts

As the messages above suggested, the forum was dismissed as an unsuitable means of starting a conversation and Facebook was proposed instead. As confirmed by Megan (16):

I was talking there the other day and a girl from Greece sort of asked me for Facebook and stuff like that so that we can talk and get to know each other and stuff so it's really good. Yeah, I think I've got two girls from Greece on Facebook and we kind of...we don't talk often but a random kind of 'hello' and 'how are you' I get sometimes from each other. (Megan, 16)

These students' initiative to take it a step further and migrate to Facebook, however, was just an exception rather than the rule and nobody else followed their example. A 'formal' migration to Facebook encouraged by the teachers might have motivated the students more and offered them an opportunity to interact using a tool they were familiar with. However, this option was dismissed by the teachers for internet safety and child protection reasons. As Lucy commented:

The thing is, there are problems with the law over here for teachers and students, like, I have a Facebook page but I'm not allowed to be linked with any of my students on it cause of issues of child protection and things like that so it's a very kind of grey area. (Lucy, interview 2)

On the other hand, Dimitra after facing problems with students' registration and access to TwinSpace appeared more tempted with the alternative of using Facebook, though still sceptical and hesitant:

What they asked for was 'Miss, please can we form a Facebook group and communicate with them since we are always on Facebook anyway'. I think if there wasn't a problem with safety on Facebook this would be a really good means of communication. And a lot easier...but we didn't do it because Lucy had told me before that safety issues were really strict in the UK and to be honest it's better to keep away from it too in Greece because you never know where that might lead you. (Dimitra, email interview)

Notwithstanding these few instances of online interaction, the prevailing student mentality was that 'everyone is waiting for somebody else to do the first thing' as Lucy described:

They put posts up about themselves 'I like doing this' but they haven't actually comment on 'what do you do' and I think it's one of these things...once you get one of them to put a sensible question up they others will follow. You know what I mean? Everyone's waiting for someone else to do the first thing...I think it's one of those things, the more times they do it, they'll get used to doing that. (Lucy, interview 2)

The issue of assessment as a means of further motivation was also raised by students:

We had exams in January so everyone was like ‘hm shall I do some work on the not-assessed project or shall I actually do some work for the exams that will affect my future?...I think assessing is the way forward because if you just leave it unmonitored people won’t do anything. But if you assess it at least a good majority of people will actually put some work in it. You always get the slackers of this world who don’t do anything. (Mike, 16)

Similarly, Lauren (17), who was rather frustrated about doing all the work herself, as her partner remained uninvolved, added:

Maybe it would have worked out a lot better if people actually did like more work cause I know quite a lot of people who didn’t, quite a few people did, but it would have been good if it was like a set project and we had to do it for a mark and more people would have got involved and that wouldn’t have happened but it still wouldn’t have made it better because we didn’t speak to them. (Lauren, 17)

Teaching and learning impact

As the students reflected in the focus-group interviews, after the initial disappointment due to the lack of interaction the wiki was perceived as a ‘useful’ and ‘helpful’ tool for exam revision – associating with an online repository where they could access resources at the won space and time:

It will be useful for revision because you know where your section is and even if you did not do a lot yourself you can look at what else the others did but for that sort of exchange side of it was kind of pointless really. (Greg, 16)

It’s good that all is in one place so you don’t really need to keep looking at different places you can use that one site for it. (Jenny, 17)

And it’s good for our revision cause we’re studying in our own speed, in our own time and we’re also keeping up to date so yeah. (Dennis, 17)

It is worth highlighting that although the students described Wikipedia as untrustworthy, they did not express any concerns regarding the reliability of their own project, which had been created to a large extent by using online resources such as Wikipedia.

As regards ICT skills, there were differentiations depending on the degree of student engagement and the level and familiarity with digital technologies. The students who had described themselves as confident ICT users did not report particular enhancement of their skills whereas some other students commented that they noticed some small improvement with regards to using some new tools:

Probably improved a little bit, I didn’t really...I hadn’t blogged before, learning to do that was quite interesting. (Neil, 16)

I'd say they've improved but I knew how to navigate the...so it was easy for me. (Penny, 16)

Mine are the same really, there's real no improvement. (Ned, 18)

Conclusion

This chapter has attempted to describe and explore the eTwinning journey of a UK college and their partner Greek school. On one hand, the focus has been on the range of technical difficulties and other inhibitors as well as drivers for participation. On the other hand, emerging findings relating to the use of tools and other communication and collaboration issues have been presented and further analysed. Last, this chapter has endeavoured to unpack the micro-level, teacher and student practices that underpin the use of ICTs in formal educational settings and look at the wider factors that affect online school collaboration at meso- and macro level. Thus, it could be said that the use of web 2.0 tools to facilitate online communicative and collaborative practices in this eTwinning project were shaped by a number of on-going challenges, interests and actors alongside the ones associated with the individual teacher and student.

Chapter 7: The London suburban case study

The school

The school was mixed-gender, non-denominational and international located in a prosperous town south-west of London within the London commuter belt. The school was founded in 1967 and there were approximately 1,300 students from about 60 nationalities, aged 2½ to 18 years attending all levels of education from early childhood to high school. It was a fee-paying school with a range of academic, athletic and boarding facilities housed in both period and modern buildings. The teacher and students who took part in the research were part of the Middle school division which as the Head teacher described hosted ‘a diverse community both internationally and academically’ with ‘about 45% Americans and about 55% different nationalities and about 60 nationalities within that group’ (Head teacher interview) ranging from students with learning needs to the bright and gifted ones as well as students who did not have English as their first language.

The school prided itself on promoting academic excellence within a supportive, international community whilst it encouraged a student-centred approach to teaching and participation in a range of extracurricular activities, such as sports, field trips, community service and fine arts. It also offered language support programmes both in English as an Additional Language (EAL) and other Native Language Enrichment (NLE) programmes in over 12 languages. As regards ICTs, the school had an Apple computer lab open to students who wanted to work on class or homework projects whilst ICT skills were also integrated into core, arts and elective courses. Apart from the computer lab, laptop carts were available for use in the classroom. As the Head teacher commented:

...we have six laptop carts, each cart has about 25 computers so teachers sign them out and use them for all sorts of things, just general writing, students creating power points, they're connected wirelessly so students can do research by using them individually and with groups. We have interactive whiteboards in all the classrooms so that teachers and students can use them in an interactive way. (Head teacher, interview 1)

Amongst the range of extracurricular activities, various field trips were organized including exchange visits for students of French and Spanish as well as visits to art

galleries, museums, environmental centres and other points of interest in the UK and internationally. These were implemented in the framework of foreign language or social science courses. Other local and international programmes that ran in the school included 'Habitat for Humanity', 'Model United Nations', and 'Mission Antarctica', as well as on-going projects in India, Zambia, Kenya, and Namibia. In particular:

...11th and 12th graders have the opportunity to go to Namibia for a number of weeks in the summer and the whole year before that they are planning and preparing and raising money for it. The Middle School's connection with that is more in the area of supporting it. We might do charity fundraisers or collect things to then be shipped off to the school in Namibia. (Head teacher, interview 1)

Figure 7.1: London suburban school

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Figure 7.1: London suburban school

The eTwinning project

The project took place during the academic year 2009-2010 but was carried out exclusively outside the eTwinning platform and external tools were used. My data collection was organized in three consecutive visits throughout the school year 2009-2010. The focus of the project was to create a connecting link between one

class of nine students aged 12-14 who studied German in the UK school described and a class of students in Germany who studied English as a foreign language. The project did not have a specific topic or title but the aim was to familiarise students with each other and use the two taught foreign languages (English and German) for practicing and learning within a more authentic context. In particular, the main focus was to get students to talk about themselves and their hobbies, interests and differences in culture. Isabel, the teacher in the UK school who initiated the project, described her class of nine students as mixed abilities and levels:

Two different grades, three different levels. I've got three students who are at an advanced-beginner level, this is their first real year of German...Then I have four students who are all in seventh grade...eh...and this is their third year of German. And then I've got three students who are some in seventh grade some in eighth grade who are one year for their advanced however two of them have German speaking parents so that group moves very, very fast and the one girl that doesn't have any German speaking parents she is also making fantastic progress! (Isabel, interview 1)

The UK participants

Isabel was an American teacher of German working at that particular school for the last four years with more than ten years of teaching experience in general and international schools in Germany, Japan and the UK. This was not her first eTwinning project but she had had taken part in five other projects before. Moreover, during the academic year 2009-2010 she was involved in a second eTwinning, wiki-based project. The topic and aims of this other collaboration were also associated with improving German language skills but the age group of the student participants (primary school pupils) was not relevant to this research study.

In terms of ICT skills, Isabel appeared to be rather confident and she had not taken part in any of the eTwinning workshops or seminars because as she reasoned 'nothing has been really interesting or I already have those skills' (Isabel, interview 2). At another point of the interview she commented:

...when Macintosh just came out in 1984 I had one because my dad was in engineering so he got one from work but...eh...it's only because I like them and I work with them for so long that I'm so comfortable... My husband's also an ICT teacher so I think that's probably part of why I'm also interested as well. You know he helps me keep up to date and I also learn a lot from him. (Isabel, interview 1)

Similarly, Isabel was presented by the school Head teacher as 'computer savvy' and an 'innovative teacher...involved with a number of different programmes' (Head

teacher, interview 1). As an Apple Distinguished Educator she was responsible for setting up the programme in her school and organizing a visit for other teachers within the framework of an Apple Distinguished Educators workshop. On top of that she was the sixth grade team leader and she also worked in the school's boarding house.

The partner school

The partner school was a small private secondary on the outskirts of Berlin with only 56 students enrolled at the time of the research but growing each year to offer upper secondary education. No other collaborative programmes ran during that academic year and 18 students between 13 and 15 years old were involved in the project as part of an extracurricular after-school activity. The German teacher, Marlene, had eight years of teaching experience in the subjects of Spanish and English as a foreign language and had taken part in another eTwinning project before. As she described 'I found out about eTwinning through an ex colleague, who was using it in the school I used to work at before' (Marlene, email interview).

Drivers for participation and initial expectations

Key to both teachers' initial decision to get involved in such a collaborative project was their desire to create a connecting link between the UK and German school and enhance the pupils' foreign language skills (German and English respectively). Isabel, in particular, viewed participation in eTwinning as offering authentic context for her pupils to practice the language they were learning and motivate them more but also as a means of promoting their European identity. As she reasoned in the interviews:

I wanted to give my students a better connection with Germany and I wanted them to get to have some kind of personal experience to help motivate them...I think to keep kids interested or anyone interested over time there has to be some real reason that they are doing and actually have the connection, you know, like meet someone even they don't meet face to face they have the chance to be interested and involved at just another level and be just a little more motivated. (Isabel, interview 2)

Similarly, Marlene's main driver in taking part in eTwinning was related to benefits for her students but she also found at a personal level 'it was enriching to work with another teacher and to benefit from her knowledge and expertise'. Still, the major benefit was:

to give my students the opportunity to use language for real communication purposes, and to get them in touch with young people their own age in other countries in Europe. (Marlene, email interview)

In addition, both teachers expected their classes' collaboration for the particular eTwinning project would lead to an exchange visit or even the establishment of a more permanent type of partnership. Isabel's enthusiasm and expectations with regards to the potential of the project as well as the students' initial reactions and excitement were depicted in the excerpt below:

I think they find it like awesome, like it's someone real they are communicating with and I think it just makes everything...it's authentic finally, like it's something real and...eh...it makes them try in different ways and it makes them I think much more inquisitive and it opens up all these other questions for them...I think it's really great, I think it's totally the way for them. (Isabel, interview 1)

At a personal level Isabel felt that participation in such eTwinning projects enhanced her professional profile despite the lack of other monetary benefits:

Like for me personally, sure [there are benefits], because it keeps me up to date with what's going on technology like. I think that's really important, and especially I don't think I'm going to be here forever. So, I always want to have things on my CV and be really current and know what's going on... but...eh...that didn't get me, like, a raise or...I have received no monetary benefit from it other than that at school people know that I do that and they come to me if they have questions. (Isabel, interview 1)

For Isabel another perceived benefit was associated with the flexibility that participation in such a project offered in terms of organizing and her diverse classroom:

Another benefit I thought was because I have this class that has so many different levels in it, it would be something that would be easily differentiated, that every student could work on it at their own level and so yes I think that is benefiting me even because otherwise I would just be going around trying to get resources for literally three different classes in the same classroom. (Isabel, interview 1)

At an institutional level, both teachers felt they had the support of their head teacher and that the technical infrastructure at their school was adequate for the needs of the project. In addition, with regards to institutional benefits, Marlene commented on how the project reflected positively on her school:

Parents and visitors have learnt about the exchange and are pleased that the school has connections or relations with other schools outside Germany, as this helps students open their horizons. (Marlene, email interview)

Isabel, on the other hand did not identify any benefits for the school at an institutional level and also highlighted some of the reasons why other colleagues did not take part in similar initiatives:

I don't know anyone else who does eTwinning. I've taken it to department meetings but I think people feel like a little bit afraid of using the technology maybe or just that they don't have time to include it in their curriculum. (Isabel, interview 1)

Similarly, the UK school Head teacher pointed out how participation in collaborative activities was initiated and encouraged mainly for the benefit of the students rather than for enhancing the school's profile:

I think, you know, our philosophy as an international school is to educate students and provide experiences that encourage them to be global citizens and you do that by doing these type of programmes. I don't think we do it for the PR. If the PR happens, that's fine but that's not why we do it. (Head teacher, interview 1)

Last, Isabel's decision to become involved with eTwinning was largely triggered by an invitation she had received to take part in an eTwinning conference in Prague:

I think I found out about it at the language show in London, that would have been November 2006, I think it's right- the first time I heard about it. But I think I maybe went on and looked but didn't really pursue much but I got on the list that would send emails to me and then...eh...one day...out of the blue I got an email asking if I wanted to go to a...like a conference in Prague to meet other people in person from the Czech Republic...then I went to this conference in Prague and found a number of partners and kind of set up a number of projects. (Isabel, interview 1)

Participation and expectations: pupil's perspectives

Participation was compulsory for the nine UK students and most of the activities took place within their German class curriculum. In the few instances that the students did not manage to finish their task within class time it was assigned for homework. Students' perceptions of the aims of the project were largely associated with using German to communicate with another school and compare interests and cultures:

Stevie (13): We send messages to the other school and they reply and we talk to them and we, like, notice how their culture is and our culture is and we really just...look at the values...how everything hangs out in Germany and how everything works here in the UK.

Sarah (13): You get, like, a connection with the other school and help our German and their English.

Marla (14): Basically we are using these computers and we are writing letters back and forth talking about different things.

Flora (14): Yeah, we have our own page and like every student there has their own account and same here and so we can like post stuff on our account or on their wall whatever saying our interests, are just like movies or something.

(Focus group interview 1 and 2)

Students', however, expected that communication with their partner school would be more frequent and interactive and when there was a communication lapse excitement was replaced by boredom or indifference.

The tools

The tool used for this collaborative project was exclusively a wiki configured by Isabel at Wikispaces, a free wiki hosting service. The eTwinning platform was primarily used only as a partner finding tool and once the partnership was established both classes migrated to the wiki. Isabel appeared to be particularly unenthusiastic at the idea of using TwinSpace for their project since her prior experience with using the platform had been negative. She acknowledged the value of the eTwinning platform as a partner finding tool, but she paralleled it to Facebook. As she commented:

What I think the strength of eTwinning is, for me, is the first layer, it's just making a connection like, you know, what classes are doing what, like who's out there who wants to do something, like it's making these little connections and then after that me and other person once we get into a little chat room or whatever will come with our own ideas and will make a project together ... it's like the big educators' Facebook, the big educators' meat market and dating site basically, you know, like you put your profile up, you find each other great and go to a private chat room and whatever, and you know, you see how you go from there. But I don't think it's ever as successful unless you also couple it with something off the eTwinning site, like a wiki space or you know something from Blogger, whatever works better for your purposes. (Isabel, interview 1)

Wikispaces was selected to host this particular project and Isabel was mainly responsible for creating the thematic categories, configuring the students' pages and updating the wiki throughout the academic year. Wikispaces is seen as a basic, easy to configure and modify tool offered free of charge to registered users and has been used as a hosting platform in a range of educational projects. It allows teachers to create a customised, ad-free wiki where the students can work collaboratively to add new content, edit existing pages, comment and engage in discussion. The teachers can set the permissions and set the wiki to private whilst notifications of recent edits and changes can be sent to an email account to allow the monitoring of the project.

As Isabel reasoned the potential of wikis to organise content thematically was what appealed to her most and affected her decision:

I actually use them because they are really easy to set up but ideally...I really like the wiki because it doesn't update as a blog and especially when you want specific different information you can have it catalogued according to subject on the menu bar on the side and that's basically the main [advantage]... (Isabel, interview 1)

Additionally, the students across the two teams exchanged emails through their teachers' accounts and used other tools such as Microsoft Office to produce word documents on various topics. Last, other 'analogue' tools were used for communication when paper cards were exchanged before the Christmas and Easter holiday. A screenshot of the project's home wiki page can be found in Figure 7.2 below:

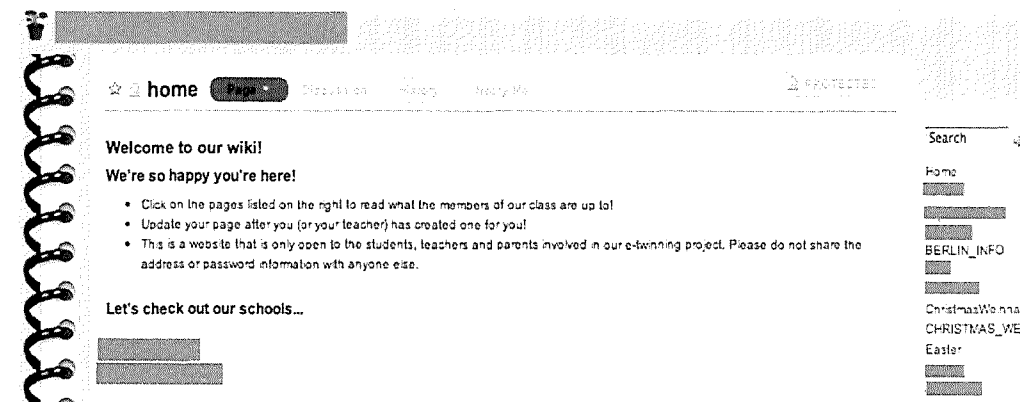


Figure 7.2: Screenshot of the wiki home page

The journey: implementation of the project in practice

As already discussed the original idea for the project was conceived by Isabel and her initial aim was to start a collaboration between her school and a German partner that would lead to an exchange visit for students in both schools. The process of finding the German partner school was fairly straightforward: she posted a message on the eTwinning partner finding forum to which Marlene replied. They started communicating in the summer of 2009 and by the time the new school year commenced they were ready to get their students involved and start the collaboration. Despite running the project within the framework of eTwinning and making the initial contacts and arrangements through the official platform, it was never officially registered and the teachers did not undergo the bureaucratic procedures of submitting an official application, getting approval and being

allocated their own TwinSpace. This chimed with Isabel's general attitude towards eTwinning already discussed - she recognised its value in helping her make the connections with the partner teachers for both the projects and then immediately migrated to other tools since she was particularly negative about the platform and the tools available. As she commented during the interviews:

I didn't use the Twinblog at all, that was before the site was revamped and the Twinblog was even worse than it currently is, like ho-rri-ble!...The eTwinning platform itself is really awful, like I can't use it and the other school can't either, eh, their blog is awful and so there is no incentive to do that and besides I'm not doing it for any award for myself, like I'm doing it trying to get my kids interested and all I want to use the eTwinning platform for is to make that connection and after that it has been made, eTwinning has served its purpose and me and the other teacher will carry on. (Isabel, interview 2)

Thus, once migrating to Wikispaces Isabel was responsible for configuring the wiki and then both teachers invited their pupils and granted them access to the site.

...I think we started communicating maybe in June or July and we just sort of sent the odd email back and forth and by the time the school started we had a more firm idea...eh...so we just kept going with it... I created [the wiki], I gave her [the other teacher] access, we are both administrators on it and then we've invited all of our students with the email addresses and they have their own log-in to it. (Isabel, interview 1)

Other perceived benefits of using the external wiki provider compared to the official TwinSpace wiki tool were associated with ease of use and the notification tool available on Wikispaces. As Isabel reasoned:

[Wikispaces is] so much easier, I mean I know there are not so many steps to get into the eTwinning but there's just enough to make it that much more cumbersome. Plus I can direct any information or any movement or any changes on the Wikispaces can be directly emailed to both me and the other teacher...eh...and I just find that far more convenient. (Isabel, interview 1)

In the screenshot of the wiki home page in Figure 7.2 above, one can see on the right-hand side that the wiki tabs consisted of a list of the names of the nine students in the UK school (blurred for anonymity purposes) and the thematic categories they worked on. These tabs were configured by Isabel and the students had to create their 'home' pages with information about themselves whilst they also added content to the other more wiki pages. The UK students were able to log on the wiki and work either during their lessons when time was devoted to the project or from home. However, no separate pages were created for the German students since they were not able to use the wiki individually for reasons that will be further explored. The students in the UK school posted in German whilst their partners in Berlin posted in

English. As Isabel described the students in the German school worked on the project once a week as an extracurricular activity after school whilst she tried to adopt a similar time pattern with her class and she felt a connection between the students was achieved.

[The German teacher] is not teaching the students that are working with her, what she's doing is running an after school club, I think it's one afternoon per week or something... so it really works well because it's about the same amount of contact span that we would work on, actually I'm sure we work on it less than they do but it's decent, like it really helps the kids get in contact, like when we sent Easter cards, the German kids all sent Easter jokes, they all made up these little jokes and then our kids had to read them and figure out what they were, it was really cute so it's been good, it's like they really made a connection. (Isabel, interview 2)

Technical inhibitors

Despite Isabel's original enthusiasm with regards to the use of Wikispaces this was not without problems and a range of technical inhibitors were felt to have arisen especially with relation to the German participation. Access to ICTs was fairly unproblematic for both partners and was not reported as an inhibitor. As can be seen in the pictures below as well on the excerpt of the field notes taken during of the observation visits, Isabel's classroom appears to have been more than adequately equipped since for the particular class there were ten iMacs available for nine students.

Field note from visit 1: 11 December 2009 (13:55- 15:10)

The classroom is pupil-friendly with big windows on the external wall, bookcases and shelves with dictionaries, books and plants. It is of average size with only fifteen desks in the middle of the room. The teacher's desk is in the right hand corner of the room – on it there is an iMac computer connected to an interactive whiteboard while the two walls below the windows and opposite the whiteboard have another ten smaller desks with iMac computers for the students [...] As the teacher later informs me not all classrooms are equipped with such a large number of computers but as she is one of the most technology-savvy of the teachers and she is involved in eTwinning she was granted her wish for computers in her classroom which she shares with colleagues when requested.

IMAGES REDACTED DUE TO THIRD PARTY RIGHTS OR OTHER LEGAL ISSUES



Picture 7.3: Isabel's classroom

Notwithstanding the importance of sufficient infrastructure, teachers encountered a range of other technical inhibitors. Although Isabel was able to register her students and use the wiki, this was not the case for Marlene. As Isabel described:

They had a lot of trouble because of their specific IT configuration...only the teachers were able to get through, the kids haven't been able to use it, if they use the school's computers...I don't know exactly why but the kids are also not able to log on from home but I think the teacher is not particularly technologically savvy so she does not know how to enter the kids email addresses and she is not comfortable with sending me the whole list of the kids email addresses. So, the individual kids don't log on in the way I had envisioned and hoped but at least there's communication happening. (Isabel, interview 2)

Although Marlene did not discuss whether she would be have been willing to share her pupils email addresses with Isabel, had she been willing to help out, she reported lack of support from her school's ICT team as an important inhibitor:

I couldn't get my students to create their own page on the Wiki because of support problems with our system here, and the lack of help I got from the ICT team at my school because of lack time and work overload on their part. I can't remember exactly now what configuration (sic) problems we had, sorry. Yes, students couldn't log on their accounts and it was all done through my account, which was a nightmare... if I were to do it again I'd first make sure that I could enlist someone from the ICT department to help us with the technical aspects. (Marlene, email interview)

Similar problems were reported by Isabel with regards to organising an online videoconferencing session. On one hand, she argued that her school's high tech infrastructure in the computer lab did not allow them to use these facilities since there was lack of compatibility with the other school. On the other hand, she described how when they tried to skype the German school still faced technical difficulties and in the end they did not manage to chat online although the initial trials were successful:

Our school has amazing videoconferencing facilities but they are so high tech that the other schools aren't able to receive our signal or use them basically so what it results in is that we just use Skype in our classroom and we've had two successful trials but we've never had a successful videoconference with both groups of students...one of the problem is that when we do the trial I'm in my room, the same room that I teach in but the teachers there don't have access to the room they are teaching so they do the trial with the two of them like in the head teacher's office and then they just took all the equipment to their classroom but of course that has to be completely reconfigured for that and they don't know how to do that so it was a disaster, it was really awful. (Isabel, interview 2)

Conversely, when Marlene was enquired on this she briefly stated that they 'never tried using Skype'. As the excerpts from the students' focus-group interviews below denoted, students gave similarly equivocal answers as to whether there were indeed any attempts to use Skype with the other school:

Stuart (13): I remember once when we actually were supposed to actually try to Skype with them but, like, it never actually worked out... I thought it was going to be awesome to be able to skype with them!

Marla (14): They said we were going to skype and then Miss [Isabel] forgot about it and didn't do it.

Int: The boys told me you tried once but it didn't really work out.

Marla (14): She never...we never actually saw the trial, she just said it didn't work out and we never did it anymore.

Wikis: students' (un)familiarity with the tools

As already discussed, Isabel appeared technologically experienced and confident in using the wiki technology herself and she felt her students would be able to use the tool efficiently. Notwithstanding the students' inexperience as this was their first wiki project, Isabel reasoned they soon acquired the adequate skills since they were familiar with using other web 2.0 technologies such as podcasts and blogs in the classroom.

The first time they didn't know what to do or how it worked...the wiki is set up a little bit differently maybe than other websites they've been on but no like we just went through together once and then they were fine. It's very easy, it's pretty basic. Like for most of the students this is their fourth year with me and I had individual blogs like per class so that they are used to like going online, you know, writing me a comment or posting on the blog...[they've been] using computers yes, but then not...eh...publishing material, like they made podcasts before but those were all used in house, just within our school. (Isabel, interview 1)

Similar findings were noted with regards to students' familiarity with using the technologies during the class observation visits when students engaged with the wiki project. Once Isabel projected the webpage address of the wiki on the interactive whiteboard the majority of students were able to log on the wiki and most of them started working on the assigned task. During all research visits, three students (Marla, Stevie and Mary) were particularly engaged with the project and updated their profile page or other wiki pages. Only one student, Rob (12), after he spent most of time browsing other pages and the teacher noticed and reprimanded him complained that he could not log on the site. The other students either did less work on the wiki or appeared rather uninterested most of time in working on the wiki and pretended to edit their pages without putting too much effort in.

Class observation 1: 11 December 2009 (13:55- 15:10)

14:40 – 15:10 I cannot see very well what Rob (12) is doing from where I am sitting but at some point I see that he has the MNS Hotmail page open without using MSN though and looks quite bored and uninterested. The teacher notices him and says 'Rob, please go back to your page and work on updating it'. The teacher goes to her computer, finds the link for Rob's profile page on the wiki and projects it on the whiteboard so that he can copy it...Stevie starts updating his profile while Stuart continues working on his card in Word. Rob eventually opens his profile page but he does not seem to log in...Some minutes later he tells Isabel he cannot log in and since in a few minutes the class finishes the teacher asks him to edit his profile as part of his homework and he takes a note in his diary.

Students' in-and out-of-school use of ICTs

Before looking at the more specific findings associated with students' engagement with the wiki, it is worth examining their more general attitudes and practices related with the use of ICTs and other web 2.0 tools in- and out-of school. Students did appear familiar with using the iMacs available in the classroom and this became apparent in the class observations. During the first class observation the students had to work on writing individual Christmas cards for their partners in Germany and when they finished they were asked by Isabel to work on updating their wiki profile

pages. Familiarity with using the iMacs was demonstrated in the following instances: first, Janice (12) successfully replaced her Safari Desktop picture with another one she found on Google images and second, Flora (14) played with Photo Booth and not only took pictures of herself alone or with Marla but also added effects.

Class observation 1: 11 December 2009 (13:55- 15:10)

14: 45 After the group of three girls finish working with Isabel, she asks them to update their profile pages on the wiki. Janice joins the other two girls who had already logged in on a Mac and sits next to them. The teacher leaves everyone to work on updating their profiles while she does some marking. Janice logs in and says 'why for some reason do I have this background?' The other girls laugh and Janice adds 'Well, it's not stupid, it's the world we live on but it's boring anyway' (the background image is planet earth). She changes her desktop image (without asking any help) to one with lots of yellow smiley faces and shows it to the other girls. Flora is playing with Photo Booth taking pictures of herself and adding effects. Marla joins her for one picture but then she continues updating her webpage... Most of them work on their profile page apart from Flora who looks bored and continues playing on Photo Booth.

During the same class observation other instances of ICT engagement included the use of online translator sites (Stevie, 13 and Stuart, 13); the use of Word to create a digital Christmas card (Stuart, 13); Google searches for Christmas images (Stuart, 13 and Marla, 14); printing out the Christmas card and the images (Stuart, 13 and Marla, 14). Students tended to work individually on their iMacs and the only exception appeared to be Stevie and Stuart although their practices can be viewed more as examples of 'peer-support' rather than collaboration.

Class observation 1: 11 December 2009 (13:55- 15:10)

14:40 Stuart leaves the classroom and returns with a printout of his card, he shows it to Stevie who points out that he should move the text and images at they appear on the left-hand side of the card and that's not the way it should be. So Stuart moves everything to the other side of the page on his word document...Stevie starts updating his profile while Stuart continues working on his card in Word.

15:05: The teacher tells them 'OK guys, less than a minute. You need to log out'. Stevie saves Stuart's card on his desktop and tells him so when he comes back from the printer with the card.

Isabel appeared to be quite flexible and allowed them to work at their own pace and select the tools of their choice. It was quite difficult to monitor each student or group individually since there were three groups of different levels of German in the same class. The common practice was that, whilst she worked with each group on their

German, the others would be assigned a different task either lesson or eTwinning related. As she reasoned:

Another benefit I thought was because I have this class that has so many different levels in it, it would be something that would be easily differentiated, that every student could work on it at their own level and so yes I think that is benefiting me even because otherwise I would just be going around trying to get resources for literally three different classes in the same classroom. (Isabel, interview 1)

However, this often resulted in insufficient monitoring and some of the students spent their time doing irrelevant things online and pretending to be working on the wiki. This is apparent in the case of Rob who only claimed he was not able to log on his page minutes before the lesson finished and spent more than 15 minutes aimlessly browsing online and also in the case of Flora during the second visit. A more detailed description of this and other examples of student engagement with Wikispaces and the project can be found in appendix 6.

Students' engagement with the wiki and ICTs during these class observations demonstrated a mundane rather than exemplary use of the tools whilst not all students appeared to engage with the technologies and about a third of them chose to read a German book or magazine as opposed to updating the wiki. Other types of in-school engagement with ICTs and web 2.0 tools, reported in the student focus-group interviews, involved use of the school's computer lab for the ICT subject every eight days and sporadic use of ICTs in other lessons. Several pupils mentioned the sporadic in-school use of the Rosetta Stone, a computer software programme for language learning. As regards the use of web 2.0 only Marla and Flora were familiar with using a wiki before as part of their social studies lesson the year before, however, it was used by the teacher to post information.

Out-of-school use of ICTs appeared to be more frequent and involved a wider range of activities. The majority of students used home or personal computers almost on a daily basis or several times a week either for school-related assignments or recreational pursuits. The excerpt below is representative of the most common activities associated with students' ICT use at home:

Flora (14): I use it for like internet and social networking and music.

Marla (14): Yeah, I go on Facebook...eh... I use it for Word to set up things, I use it for research...[the other two girls laugh when they hear the word research]

Janice (12): Yeah, I just...on the computer I usually just check my email or do like school work, like type up things.

All students reported using the computer and the internet for school homework, which mainly involved using Microsoft Word to type school assignments and more seldom looking up information. Rob (13) also mentioned that he would also go online if 'we have some quiz on maths or some things for science or to check something'.

Recreational activities mainly consisted of using Facebook, playing games online, listening and/or downloading music, watching videos on YouTube and communicating with friends and family. Facebook was the most common shared online activity for all students but one girl, Janice. She explained that not having a Facebook account was not her personal choice but was rather imposed by her parents – 'My parents think, it's like, not good for me, they don't let me have it, yeah' (Janice, 12). As this was an international school and students' ethnic background was varied, the use of Facebook and other online social networking tools was largely associated with keeping in touch with their families abroad. As the students described:

Int: Do you all have families abroad?

Marla (14): Yeah, Germany, America, Poland.

Flora (14): I have family in America.

Nicholas (13): I only have family in Holland and in England.

Marla (14): I talk with my family in America. I also have relatives in Germany, my mum's cousin and I just talk to him on Facebook.

Another use of Facebook reported by students was related to contacting classmates to enquire about homework although to a lesser degree compared to using it for communication:

Nicholas (13): For example, I haven't written my German homework down, I forgot or I wasn't here, I just ask Sarah or what's the other girl's name...

Marla (14): Yeah, like, if you have Math and you've got page 342 and you don't write it all down you just ask somebody so that's easier.

Nicholas (13): Yeah.

Marla (14): But then we just talk, mainly we just talk.

Flora (14): Or look at pictures.

More elaborate uses of ICTs involved using iTunes not only for listening and downloading music but also for digitalizing it by 'uploading CDs and stuff' (Rob, 13) whilst commenting on YouTube videos posted by friends was another activity reported by another group of students. Last, two other students mentioned reading a website where people posted their thoughts but they had not contributed anything themselves:

Flora (14): I like reading pages like MRA.

Marla (14): My life is average cause it's my life (<http://mylifeisaverage.com/>).

Flora (14): Yeah...It's just, like, a free webpage where people post their thoughts or stories...you can go anonymously and just type in what you want.

Int: Have you ever contributed to that or something like that?

Marla (14): No, I just read them.

Students' use of and engagement with the wiki

Despite the fruitful technical conditions and the relatively good ICT skills of the students, online observations of the wiki during and after the project showed that students used the wiki sporadically and in rather mundane ways, failing to take advantage of its collaborative properties. The table below indicates the level of engagement with wiki practices of the students in the English school and both teacher participants. As noted before, the German students did not have individual logging details, therefore, there is no history track of their activity on the wiki available. Additionally, the statistics concerning Isabel are not indicative of her activity on the particular wiki since they represent all her contributions on Wikispaces projects since she initially registered in October 2008.

	Member since	Page edits	Message posts
Students			
Stuart	Dec 9, 2009	8	2
Flora	Dec 9, 2009	3	4
Marla	Dec 9, 2009	9	6
Rob	Dec 9, 2009	4	0
Nicholas	Dec 9, 2009	1	1
Stevie	Dec 9, 2009	6	7
Janice	Dec 9, 2009	2	1
Sarah	Dec 9, 2009	3	4
Mary	Dec 9, 2009	15	3

Total:		51	28
Teachers			
Isabel	Oct 19, 2008	69	10
Marlene	Dec 7, 2009	2	32
Total:		71	42

Table 7.1: Student and teacher wiki use

Marla, Stevie and Mary were the most active of the students and this was demonstrated both during the class observations and in the wiki history. Not only did they log on the wiki more times than the other students but they also had the highest number of wiki edits and message posts. Conversely, Rob and Nicholas were the least active students on the wiki. When looking more carefully at the wiki history in terms of dates and time, it can be seen that students only logged in during class time with one notable exception. Rob was assigned to edit his profile page as homework and he was the only student logging on the wiki from home.

With regards to wiki use from home there was a sense that students were not expected to do so and, therefore, they logged in exclusively during class time. Accessing the wiki from home was perceived as homework and since they were not formally assigned to do so they expressed no personal curiosity to explore the wiki or post in their free time. This was also underpinned by the fact that the students' were not being subscribed to the notification feature of the wiki:

Yeah [we don't use it from home], because we don't know if they are gonna send us anything, she tells us if they send us anything...and they haven't for a while. (Marla, 14)

Only one student reported trying to access the wiki from home but facing technical difficulties:

When I...like once I wanted to see, cause I missed one German class and I wanted to see, like, whether my pen pal wrote or something and I went on the website but I couldn't, like, find it out, like figure it out. (Janice, 12)

Additionally, Marlene reported that her students had 'a bit difficult to understand 'the wiki' at the beginning [sic] and that although they 'were very enthusiastic at the beginning, as time went by motivation waned' (Marlene, email interview).

Despite the range of functions and collaborative opportunities that the wiki tool offered, students used it in rather mundane ways, mainly to add or edit content on their profile pages. This was restricted to text-based entries and no images or video files were uploaded. As can be seen in the wiki pages screenshots below, the students' few instances of a more exploratory wiki use were restricted to font colour or typeface changes but the majority of the profiles were plain black-font texts:

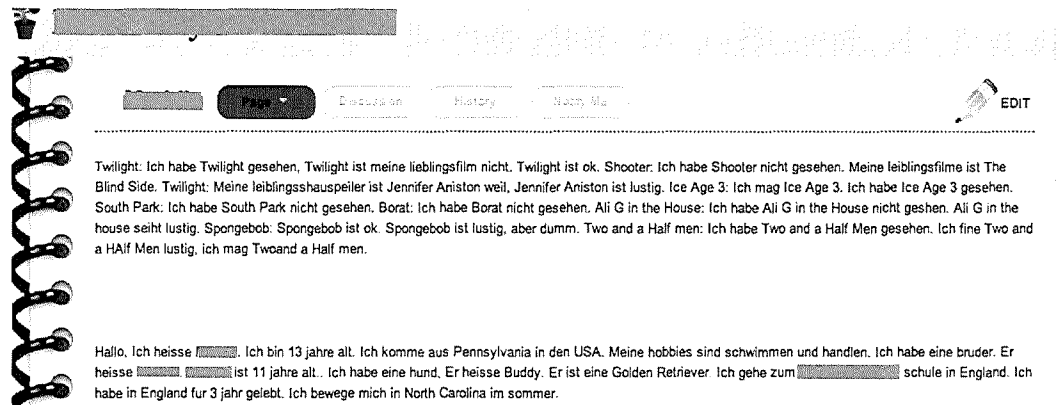


Figure 7.4: Mary's profile



Figure 7.5: Sarah's profile

With regards to the topic-related pages on Berlin and films rather than using the wiki for collaborative writing, word documents were uploaded on each page. The word documents were individually written by either the German or the UK students and were all uploaded on the wiki by Isabel. In this sense, the wiki was employed as a publishing tool or a content-sharing online space and the partner teams did not take

advantage of any of the wiki properties whatsoever (See Figures 7.6 and 7.7). As Isabel described:

Isabel: I actually uploaded those in the hope that she would be able to download them more easily and when she emailed me a bunch of things I also then uploaded those for her so that my students from home could access them.... A lot of the documents have like specific things in them.

Int: So have they used the wiki at all?

Isabel: The students in Germany? I doubt it. It's mainly me, mainly...eh...I'm probably the one who uses it the most, then it's students from my class, then she has used it some, those 'Marlene5', whatever, those are all her posts...

(Isabel, interview 2)

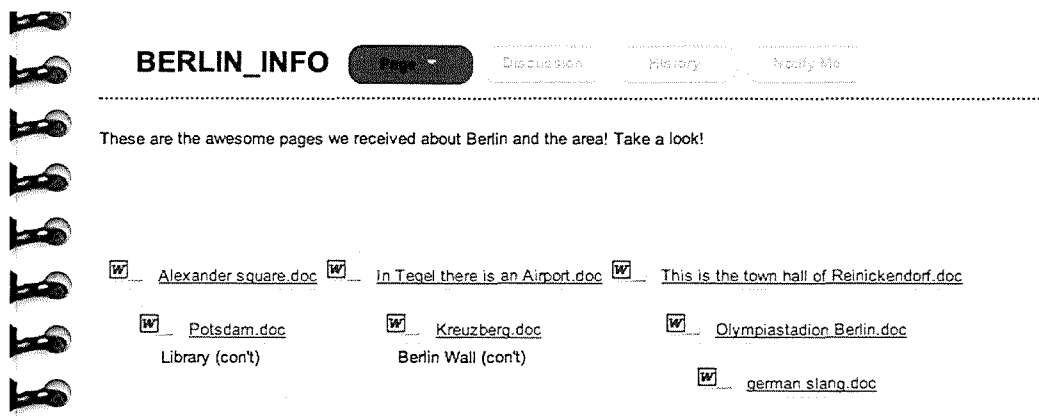


Figure 7.6: Screenshot of the wiki page on Berlin

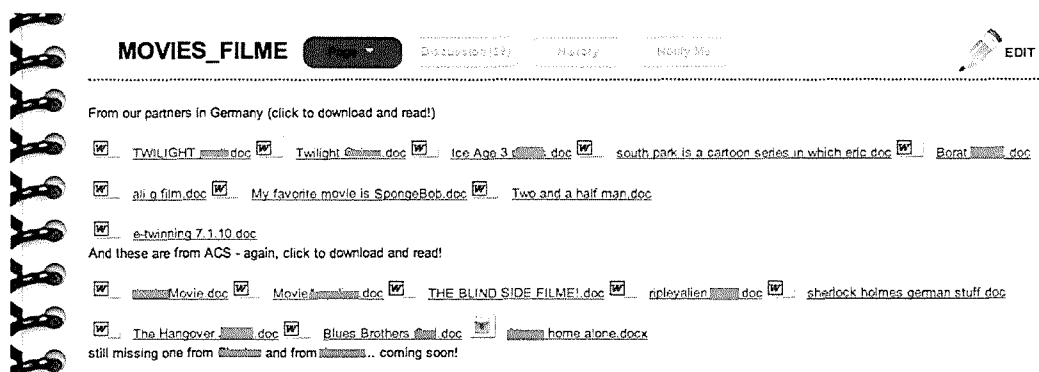


Figure 7.7: Screenshot of the wiki page on films

There was a sense that although students did not report any problems in using the wiki to upload text, they were not aware of its other features and their teacher had never explained to them that they could also post pictures or videos if they wanted:

Int: Do you know why your teacher uploaded your file on films and didn't post them on the wiki? [I show them the printout]

Marla (14): You can open them up.

Int: I know but why didn't you post them on the wiki?

Marla (14): There are, like, pictures and all that on there, and video docs.

Int: And you can't post photos or videos on the wiki?

Marla (14): I don't think so, I don't know how to use that.

Nicholas (13): Maybe we can but probably not.

On the other hand, Isabel reasoned that students soon lost interest in using the wiki and enjoyed more the activities that involved writing and receiving paper cards from their partners:

I think they probably enjoy it less [the online activities] than they did at the beginning. I think they thought it was really fantastic to be able to like be online and but I think now they are actually much more interested in having a real thing written by a real German like in their real German handwriting, that's far more interesting and a lot better contextualised. (Isabel, interview 2)

However, the underlying reasons for students' limited and sporadic use of the wiki are more multifaceted. Although no technical problems were reported and all students found accessing and using the wiki 'easy', lack of guidance and assessment also contributed to their restricted participation. For example, as noted earlier in this chapter, during the class observations Isabel's instructions were limited to 'update you profile page' and Marla was wondering at some point 'what are we supposed to do?' Similarly, some students reported in the focus group interviews that lack of assessment sometimes resulted in limited motivation.

Janice (12): I notice that we never like finish a project. We...

Marla (14): She starts something and then...

Jo (12): We read a book called "... " and we started it in the very beginning and then we stopped like for a really long time and then we started again. But there is some that we never got to finish.

Marla (14): And the thing that we did last year, the other project was...oh yeah...we had to write about a film or a play but she never told us...did she ever...?

Flora (14): I don't think she even graded it.

Other students described how they preferred working on the wiki compared to sending postcards or writing letters (see expert 1) whilst others described how lack of reciprocity and late replies led to disappointment (see expert 2).

Excerpt 1:

Stevie (13): The wiki was better than writing letters...

Rob (13): Well, the letters were, like, ...the wiki was more accessible, like, you write and you had almost forgotten what you wrote by the time you got it back and with the wiki, it made more sense cause we could do our bit on the topic and...

Stevie (13): And if you didn't remember what you posted you could just go back on the site.

Excerpt 2:

Probably I'd say I'd change writing postcards because posting can take like almost forever when it's like, it'd take probably, like, a few days [for the postcards] to get to them and then a few days for them to respond and then send us back, I'd say probably about a month after we've sent ours so it's, like, kind of communication failure. That happened, like say, Obama was elected, they sent that to us and say 'did you see that Obama's elected' and we were like 'that was about a month ago' so that kind of takes time (Stuart, 13).

Editing others' work and commenting

As already discussed, student wiki activity was restricted to adding content or editing their personal page. There were no instances of editing reported and the history activity indicated that even when students edited their profile page this mainly involved adding some new sentences on their hobbies or favourite music and films. As revealed in the focus group interviews the majority of students were unaware that they could edit pages other than their own:

Janice (12): She wouldn't be able to edit my writing cause it's, like, my personal part of the wiki.

Int: She could actually, if she wanted...-

Janice (12): She could change everything I wrote??

Flora (13)-Sarah (14): Oh, wow!

Sarah (14): We didn't know that.

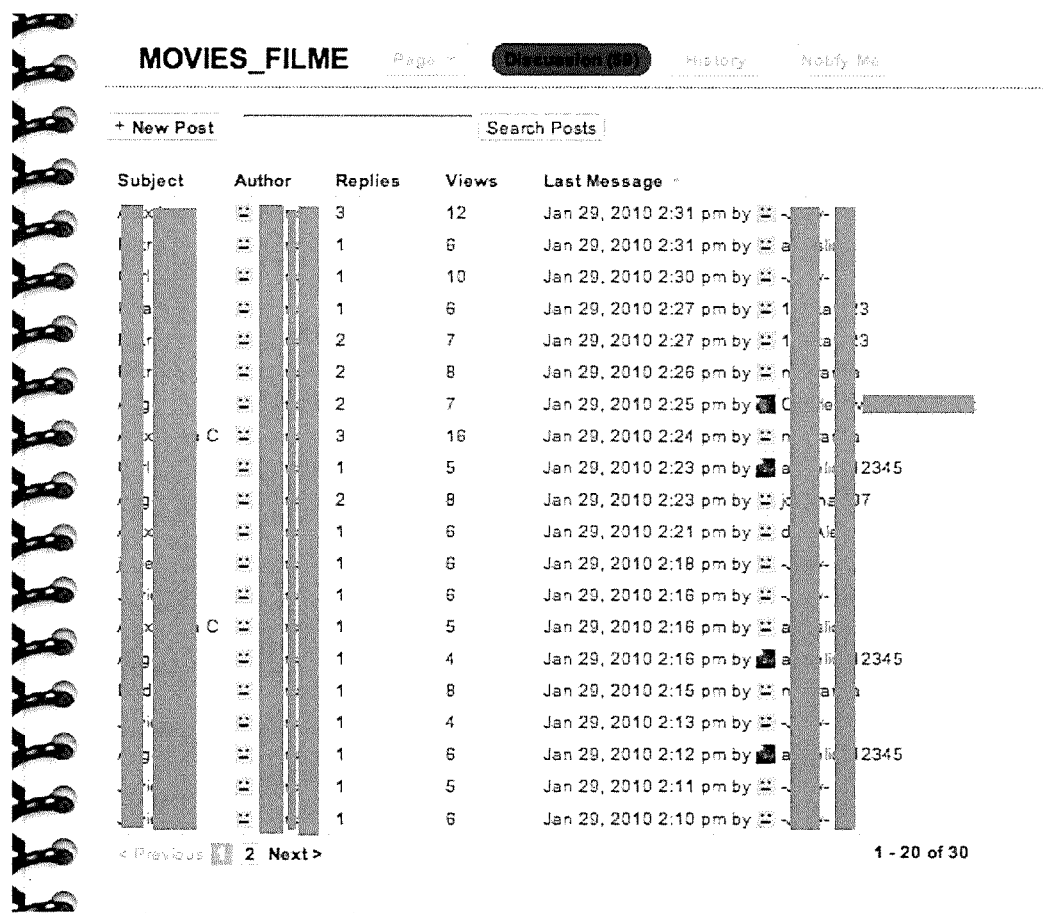
Other students did not find the prospect of editing the work of other particularly appealing.

Flora (14): Yeah, but I wouldn't really want to do it [edit other entries].

Marla (14): Yeah, it would just feel like 'are you serious? You made these mistakes too'.

There was only once example of commenting on a wiki post that was found in the history activity and was made by one of the most engaged students, Marla. When Flora wrote on her profile that she found school boring Marla commented on that but both posting were deleted and do not appear on the wiki. Other comments were posted in the discussion section on the wiki page on films and details can be seen in Figure 7.8. All posts were done though Marlene's account by different German students as a reply to the UK students' posts on films. The subject topic comprised

the name of a particular UK student who then commented on the post whilst the majority of the posts only received one reply.



Subject	Author	Replies	Views	Last Message
		3	12	Jan 29, 2010 2:31 pm by [User]
		1	6	Jan 29, 2010 2:31 pm by [User]
		1	10	Jan 29, 2010 2:30 pm by [User]
		1	6	Jan 29, 2010 2:27 pm by [User]
		2	7	Jan 29, 2010 2:27 pm by [User]
		2	8	Jan 29, 2010 2:26 pm by [User]
		2	7	Jan 29, 2010 2:25 pm by [User]
	C	3	16	Jan 29, 2010 2:24 pm by [User]
		1	5	Jan 29, 2010 2:23 pm by [User]
		2	8	Jan 29, 2010 2:23 pm by [User]
		1	6	Jan 29, 2010 2:21 pm by [User]
		1	6	Jan 29, 2010 2:18 pm by [User]
		1	6	Jan 29, 2010 2:16 pm by [User]
	C	1	5	Jan 29, 2010 2:16 pm by [User]
		1	4	Jan 29, 2010 2:16 pm by [User]
		1	8	Jan 29, 2010 2:15 pm by [User]
		1	4	Jan 29, 2010 2:13 pm by [User]
		1	6	Jan 29, 2010 2:12 pm by [User]
		1	5	Jan 29, 2010 2:11 pm by [User]
		1	6	Jan 29, 2010 2:10 pm by [User]

Figure 7.8: Screenshot of film discussion

Interestingly, there were some instances of the UK students attempting to initiate a discussion by posting questions, however, no further reply was posted by the German students and communication ended there. As can be seen from the screenshot below the first message in English is by a German student and the two replies that follow were posted by two girls from the UK school. In the first reply Marla adopted a friendly tone by using an emoticon and asked the German student what other TV shows he liked. Similarly, the second student introduced herself and asked the German student about his favourite film. However, no further reply was posted and discussion was put to an end.

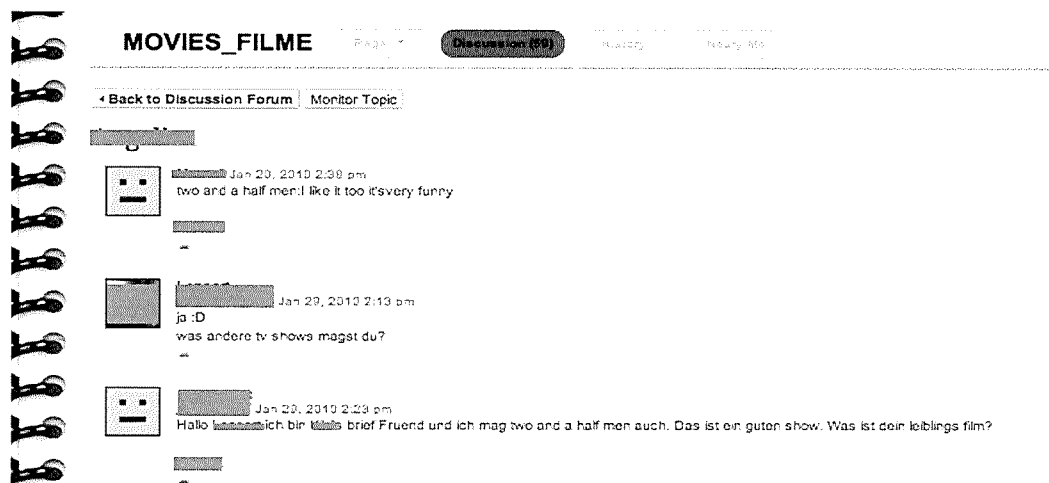


Figure 7.9: Screenshot of the discussion forum

Copying and pasting

No instances of copying and pasting were reported in this project wiki, neither was the use of websites such as Wikipedia mentioned in the focus group interviews when students discussed how they engaged with ICTs for school work. One reason for this might have been that the various wiki topics were related to students' hobbies and interests and were, thus, of a more personal nature. Still, neither were there any instances of copying and pasting on the word documents created by students on the topic of Berlin and films (see appendices 7, 8 and 9).

Collaboration and communication

As already discussed, students' engagement with the wiki throughout the project was rather sporadic and mediocre whilst no instances of collaborative writing were reported. Online collaboration or rather co-operation with their partner school was restricted to sharing of documents and taking part in some brief discussions on the forum. The common pattern of wiki use was that students logged on individually from their iMacs and updated their profile or other wiki pages. Communication at large took place through two means: first, the students wrote short letters about themselves which were then exchanged by the teachers through their personal email account; and, second by exchanging Christmas and Easter postcards. Reasons underlying the failure to use the wiki as a collaborative tool and take full advantage of its properties were associated with lack of guidance from the teachers' part since

the students were unaware of most wiki features, and also the configuration problems of the German school that limited student access.

Initial expectations to arrange videoconferencing sessions through Skype did not materialise. As already discussed, this remained unclear since teachers' and students' reasoning as to why Skype was not used appeared inconsistent and contradictory. Since students expected more frequent communication, they were at large disappointed by the sense of 'disconnectedness' they experienced:

I like the fact that I have a pen pal from Germany so...that I found cool but then we barely ever...we did do stuff but, like, we didn't do it for very long, it would have been fun if we did it, like, every week or something, once a week... we do not, like, do that often, we have a few letters and like every like third month or something. We haven't really done too much stuff (Janice, 12).

Other inhibitors that affected the quality of communication between the two schools were age and language. Although, the students were of almost the same age, there was a sense that even if their pen pal was just a year younger it made a difference and the UK students highlighted this in the focus group interviews.

Marla (14): Well, we had different topics, like, what your favourite music was or what we liked to watch so they are a bit younger and some of the girls said we love watching...well, we love listening to Jonas Brothers [American pop boy band] and watching Hannah Montana [American Disney teen sitcom] which... [all chuckling]

Nicholas (13): And, like, my guy told me he still watches Sponge Bob and that's a bit of...[all chuckling and laughing]

Flora (14): Mine is also, like, a year younger, so she watches a lot of Disney channels and listens to a lot of Disney channels, so there wasn't really much response, as I don't watch Disney channels [in a bit of dismissive tone].

In other cases the idea of writing to random students in a foreign language where communication breakdown issues were common was a cause for student discontent:

Sarah (14): It's kind of, like... it's hard because it's random strangers just writing to them. You don't really know what to say sort of and in a different language, it's also quite...

Flora (14): Yeah, they were probably laughing at our letters when we were laughing at their, like, their writing as well.

Janice (12): There was this one time when we were talking...we were discussing, like, our favourite food and she wrote foot 'f-o-o-t' so...

Sarah (14): And mine said they 'ate their brother' which I didn't really understand.

Despite the general feeling of lack of cohesiveness and consistency in their communication, by the end of the project, the majority of students had formed a vague idea of who their pen pals were, had exchanged pictures and, depending on the level of their personal engagement and interest, they had become familiar to a

lesser or greater degree with their online partners. As one student eloquently put it when he was asked about their pen pals:

Stevie (13): I like mine. I have an idea of the guy I'm talking to, I know what he likes, I know what he watches on TV and I know what he doesn't like, I kind of know what food he likes...

Stuart (13): I also know what he looks like... Mine is a guy who likes BMX, he likes watching '8 mile' like gangsta stuff really.

Overall, during the last phase of focus group interviews the most common suggestion for change was associated with making the project more interactive and using Skype for real time videoconferencing:

Janice (12): It would be fun [chuckling]... Because you could actually see the person!

Flora (14): It would be cool! You could like communicate without a break

Stevie (13):...it was fine really to talk to them but it would be better if you talked to their faces and everything so I think that Skype would fix that.

Stuart (13): Yeah, because you are basically... you are seeing them live, you are talking to them live, it's basically like you're in front of them except you can't really touch them... [enthusiastically].

Teaching and learning impact

Although the project was largely seen as a means of increasing motivation, communicating with another school and exposing the students to the culture of the other country, foreign language teaching and learning benefits were also anticipated. As Isabel described:

I feel like their vocabulary increases a lot, like not necessarily...I don't know if I see better grammar necessarily, maybe I will later in the year...eh...but I feel like that class that you watched today in particular is a poorly serviced class by me because there are also two students that are statemented special needs, one of them very dyslexic...eh...no, there's three of them and other two of them have other like behavioural, attention issues...(Isabel, interview 1)

As these last quotes intimated, many students saw the project as part of their German lesson and did not attribute any perceived learning benefits to the wiki tool or the project *per se*. Similarly, they did not find their ICT skills had improved since they appeared quite confident and did not feel they had learned anything new:

Stevie (13): I know I have personally learned a lot this year but not because of the wiki.

Rob (13): Yeah, it wasn't really from the wiki, it's studying, watching movies and that stuff.

Int: Have your computer skills improved?

Stevie (13): I don't really think it has helped a lot because my dad is super smart with Macs and computers and he shows me a lot so I know to work a lot of the things already so yeah.

Mary (13): It hasn't really helped my computer skills because I knew most of the stuff before.

Rob (13): Well, not really.

Finally, only one student reported that writing for an authentic audience affected her learning and commented that 'I believe yes [it has helped my German], I guess, like, someone's actually reading it, they have to be great but not like that much' (Sarah, 13).

Time issues

Marlene did not feel time posed any problems both within her personal agenda and the school's curriculum. On the other hand, Isabel described how lack of time, both with regards to her wider personal agenda and the wider educational structures of the school, at large affected the outcome of the project:

I also work at the boarding house and it's literally just too much. Now I sort of cut back a little bit, you know, really be realistic about what I can take on and complete and stay sane....I wish in the end that there was like more time alone for this type of thing, I think it could be so much better, like, with...you know if I had the time every day working on it, it could be a much better project but I really don't have time. (Isabel, interview 1 and 2)

Conclusion

This chapter has endeavoured to depict the eTwinning journey of a UK school and their German partners during the academic year 2009-2010. An external wiki provider was selected to host the project and despite the configuration and access problems the German school faced and the unrealised initial expectations of both partners, the majority of students and both teachers viewed their experience with the project positively. Although, the classroom conditions in terms of infrastructure were more than promising in the UK school, this did not result in greater participation and engagement with the project activities – showing that there wider institutional and social factors that should be taken into consideration.

Chapter 8: The Athens suburban school case study

The school

The school was a mixed-gender, non-denominational, urban upper high school (Lyceum) located in a relatively affluent, upper-middle class area in the northern suburbs of Athens. The school was built in 1997, it was the only upper high school in the Municipality and as the head teacher described:

There are 435 students and 50 teachers...in terms of facilities it doesn't lack anything, there are two computer labs and a sports gym and a room for multiple uses...there is the library and all the labs for physics, chemistry, etc. (Head teacher, interview 1).

Inside the school and opposite the entrance to the library there was a space that resembled an internal patio with some trees and plants with a glass roof—more akin to business or private company's building rather than a typical Greek school. The head teacher was a middle-aged mathematician appointed to this post three years ago.

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Figure 8.1: Athenian suburban school

The library

The library room, where the project activities took place, was a rather small—no more than 30 square metres— and crammed but sunny room that was constantly filled with students. As described in the field notes:

Field notes from visit 1: 6 November 2009

Every available wall is covered in shelves or book-related posters. As you enter you can see the librarian's desk on the right, a small round table with chairs in front of the bookcases and another area in the far right corner of the room with a group of desks forming an island surrounded by chairs and shelves. In the opposite corner there is a very small desk with a desktop PC crammed between another desk, extra chairs piled one on top of the other and the librarian's desk. There is another PC on the librarian's desk and more shelves and cupboards on the wall behind her. The walls are painted a pastel shade of beige and where not covered with shelves they display posters with messages about other reading clubs events and activities. The computer* is used freely by the students during their breaks and free periods as well as the reading clubs meetings. Some students ask for permission to use the computer whilst others seem to be quite comfortable and just use it without asking. They usually come in pairs and less frequently in larger groups or on their own. By and large during my visits the students use the computer to log in to Facebook, MSN, YouTube and on some occasions on Wikipedia or eBay.

** During my first visit in November 2009 there was only one desktop PC available to students, however, when I visited them again later on during the academic year 2009-2010 the old computer had been replaced by two newer PCs.*

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Figure 8.2: School library

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Figure 8.3: School library (the computer ‘hub’)

The eTwinning project

The project was designed to run for two consecutive school years and all the eTwinning activities had been embedded in the school’s student reading club. The project was initially registered on 23 December 2008 and was closed in June 2010. My data collection was carried out during the second year of the project and was organized in three consecutive visits throughout the school year 2009-2010. All the reading club meetings were carried out as an extra-curricular activity at the school’s library. The 60 participating students were divided into two groups and there were two after-school meetings held every week. The basic information on the project as described on the official TwinSpace page can be found in the following table:

eTwinning project: Relations between the two sexes: love in literature, philosophy and psychology	
Subjects	Art, Classical Languages (Latin & Greek), Foreign Languages, Language and Literature, Philosophy / Logic, Psychology
Languages	English – français (sic)
Pupil’s age	15 - 19
Tools to be used	Chat, e-mail, Forum, Other software (Powerpoint (sic), video, pictures and drawings), Web publishing

Aims	<ol style="list-style-type: none"> 1. Read books 2. Discover important writers and scientists. 3. Express orally and in writing our own views on the ideas presented in the books. 4. Go deep into the matter of love between the sexes. 5. Exchange ideas on the subject with teenagers of another culture. 6. Communicate using new technologies.
Work Process	We use “project method” in which everyone is in things he likes (sic). We read books dealing with love (this is obligatory). The Greek students meet each other every week and we discuss on what we’ve red (sic). The Danes do this in class. We write down our comments and conclusions. The Greek students meet and interview litterateurs, philosophers and psychologists and read articles in magazines and newspapers. We publish an english-greek-danish (sic) collection of short love stories and a collection of essays concerning love, perhaps decorated with our paintings or paintings from famous artists.
Expected results	<ol style="list-style-type: none"> 1. Realize our aims. 2. Have common products with our partners as: our own collected short stories, appreciation of books we’ve red (sic), essays on the matter of love, collections of paintings and posters inspired by our reading of literature.

Table 8.1: Summary of project (source: eTwinning platform)

There was also a separate page on the school’s website dedicated to the reading club activities and although it was not updated during the field work year, it captured the initial excitement of the teacher and her vision of the project. As such, it described how the focus of the project was twofold since the teacher’s aim was to engage the students both with the reading club and the eTwinning project.

According to the official description in the eTwinning desktop three partner schools took part in the project – this involved four teachers from Denmark, one from Romania and Sofia from Greece. However, only Sofia and Sanne from Denmark were actively engaged for the duration of the project whilst only the pupils from the Greek and the Danish school were registered on the eTwinning platform. The Romanian teacher ‘did very little work at first and then they disappeared!’ (Sofia, interview 3).

When Sofia came across eTwinning and started to look for partners she had already decided on the topic that she felt would attract the interest of her 15-17 year-old students. As she described this was how her eTwinning journey began:

I wanted to select a topic that would interest teenagers... the first thing that came to mind was relations with the other sex so I began... I came up with the idea ... our topic to be relations with the other sex and... I imagined it through literature, psychology and philosophy and then I prepared a project and uploaded it to eTwinning... of course this entails the difficulty that because I had a ready-made project, it was difficult for others to

agree. It's more proper in eTwinning to be more flexible, let's say, to have a general idea and then to look for people who want to work together. (Sofia, interview 1)

Similarly, Sanne felt that Sofia's project idea could be somehow integrated in her rigid timetable and subject-matter although not to a full extent:

Her suggestion for a project could be incorporated in some way in my Ancient Culture program – and I did warn her, that most of the Danish suggestions from the pupils would be ancient Greek or Roman. But we were not able to use a lot of time on the project. (Sanne, email interview)

The Greek participants

Sofia described herself in her eTwinning profile as 'a teacher of French language, holder of a master degree in the History of European Civilization (University of Paris: Paris VII-Jussieu), responsible of a library in a high school in Athens, studying (sic) library science now (second year of my studies). I am interesting (sic) in Humanistic and Social Studies, european languages, psychology, adolescents'life and problems (sic)'. She was in her early fifties with more than twenty years of teaching experience in the private and state sector and during my visits there it was apparent that she was on very good terms with the students and that they thought quite highly of her. The library was a buzzing place, constantly full of students who used the two available computers, did their homework, borrowed and returned books or simply came to have a chat with Sofia.

This was the first eTwinning project for Sofia and as she commented 'the other teacher from Denmark, she was also a novice, we were both a bit of greenhorns' (Sofia, interview 3). She had not been involved in any other collaborative initiatives before and with regards to her ICT skills she considered herself not very experienced but still relatively confident and did not hesitate to ask for help:

It was something totally new for me because you know I'm a bit old-school so, I didn't have much exposure to computers, I have acquired some experience now at an older age, so it was a challenge, I thought 'let's see how this might work out'. (Sofia, interview 1)

Approximately 60 Greek students aged 15-17 took part in the project from different classes but, since the project lasted for a total of two years, although the number of students remained roughly the same, new students replaced some older ones who quit due to lack of time. As eTwinning was not implemented in a school subject but consisted part of the reading club, and thus, was not compulsory, student

participation varied in frequency and range. However, there was a core of about 20 students who worked harder than the rest and remained engaged throughout the two-year duration of the project. As Sofia described:

Last year there were 69 students, well, this year they are about 60 I think, 59, around that because they... they were all 1st grade students, 2 or 3 were from second grade... now they are all on second grade and they have a lot more obligations this year, what I mean is that I understand that they really struggle to come because they always have tests, lessons, sometimes it happens that they have [out-of-school] lessons on Saturday at the time of the meeting. (Sofia, interview 1)

The Danish partners

The Danish partner school was a secondary General School (Dansk Gymnasium) located in a rural/industrial area in the centre of the Jutland Peninsula in western Denmark. There were approximately 420 students on roll many of whom came ‘from afar by bus every morning’ and in terms of ICTs the school boasted ‘a very well (sic) infrastructure – many computers, labtops (sic) also, internet everywhere (Sanne, email interview). Approximately 60 students took part aged 16-19 years old, and as Sanne described:

Although my pupils’ subject in the Etwinning (sic) was Ancient culture, I was able to persuade them to participate and write in English – 2 classes participated (16 – 19 years old) – one class begun (sic) the subject and the year after another class finished. They had to be pushed and persuaded to write – they did not do anything on their own initiative! (Sanne, email interview)

The Danish partner, Sanne, had been teaching in secondary education since 1976 and was a teacher of Russian, Latin and Ancient Greek (and Roman) culture, however, during recent years she had been mostly teaching Ancient culture and a little Latin. She had not taken part in eTwinning before but had participated in a Comenius project with Italy 10 years ago. She was in her early sixties and she was ‘not very familiar [with computers]’ and communication was carried out ‘only through email because she is not very familiar with these tools [Skype] either’ (Sofia, interview 1).

Drivers for participation and initial expectations

As discussed in previous chapters the drivers for participation will be explored at micro-, meso- and macro-level of analysis. First, with regards to the teachers, the main motivation for Sofia to initiate an eTwinning project derived from her personal aspiration to bring students closer to books and was related to her capacity not as a

teacher of French but at that time as the school's librarian. She argued that statistically very few students made substantial use of the library and she had thought that participation in a collaborative project would facilitate her in getting students more acquainted with books:

eTwinning was convenient because it gave us the chance to communicate with students from another country, to exchange, let's say, views with students of a different culture anyway. (Sofia, interview 1)

Her personal inquisitiveness and openness to new things was, however, the main reason for discovering eTwinning and deciding to explore it further:

...it was also personal curiosity... I used to hear about eTwinning... We were informed [through the school] from a 'memo' that briefing meetings for teachers were taking place, I went to one of these, to a couple actually, and I really liked it... because in general I like new things as I say, I like trying out new things (chuckling), I'm laughing because my husband tells me off 'you are always into trying new things' (laughing). Well, yes I like trying out new things so in this case I came across it myself. (Sofia, interview 1)

Additionally, her role as a librarian meant that she had felt increasingly disconnected from students as she had stopped teaching and she explained that:

It was always on my mind but because I wasn't in a classroom there wasn't a way for me to approach students that much [...] Because I don't teach, I can't assess students, so I thought I should do something that I won't care if... it will 'flow' more freely so I came up with this idea. (Sofia, interview 1)

For Sanne the key impetus was collaboration with a foreign school, however, her uncommon subject matter combined with the particularities of the curriculum did not allow for great flexibility:

...to exchange views and give/ get inspiration to further reading and interest in art – and get to know the other parties a little... I have always been interested in working together with other countries – and when I heard of eTwinning, I found that it could be a very convenient way of finding partners with interests like mine. In reality it was a bit difficult to find at the same time both appropriate project ideas, which I could use in my program/ lessons, and pupils of the same age as mine. A problem for me is also, that my Latin pupils only have Latin 2-3 months – and that the Ancient culture is only a subject for pupils one year. This is why my students changed during the project. (Sanne, email interview)

The Greek head teacher confirmed his supporting role towards both the library and the school's participation in a range of activities and programmes. He considered the library an 'outlet' for students during their free periods or when they had been expelled from class, and believed that 'Sofia is really good and creates the conditions to attract them to the library' (Head teacher, interview 1). He argued that although the process of participating in eTwinning could be simpler, involvement in

other extra-curriculum activities and projects was vital as he saw school not merely as a learning space but as a core for social interaction and engagement.

I always support these sort of initiatives, I don't see upper high-school as just a space for knowledge, it's not just for tuition to pass the exams and go to university... well, you see I want the school to take part in programmes of intercultural exchanges. The school is not just a space for education, it's also a space for culture and for other activities...it's a social space, every student should become a complete person first and then a student...that's my philosophy. (Head teacher, interview 1)

At school level, both teachers acknowledged that although they did not collaborate with other colleagues, the support of the head teacher was vital in their decision to go ahead with the project. In addition, for Sofia the small financial support she received from the school was critical in carrying out the student exchange:

The head teacher is greatly in favour of these programmes...he is really proactive about these [...] So, we have 100% the moral support [of the head teacher], the financial [support] to a great extent – we could have no [support] at all...he helps financially, it's just that he has this positive mood to help... if this cultural space in the school is to run, it's a matter of the head teacher. If he supports it, all's well. If he doesn't support it or he is indifferent, eh, then you lose the mood yourself. (Sofia, interview 1)

Although Sofia did not mention any other school-related drivers that initiated her involvement with the project, she acknowledged the benefits that they encountered with regards to the school becoming known in the local and wider community:

The school became known, it became known in our municipality...in our local society...they found out because we used the local football pitch to play football with the students [from Denmark], then we played basketball and volleyball somewhere else, so the municipality learned that they came, that we are involved in a project and students came...so we became a little famous (chuckling) as a school that runs European programmes which is very important...we are the only [upper high school in the area] so we got our piece of fame! (Sofia, interview 1)

The head teacher, however, did not seem particularly interested in the relative 'popularity' the school acquired in the local area. This can be explained by looking at the way the educational system operates in Greece where students register and attend school with the only criterion being their postal address. In contrast to the UK, for example, the relative publicity a school may gain only affects its status as a word of mouth good reputation and there are not other benefits such as extra funding. Thus, the head teacher placed more importance on the benefits deriving for the students and the teachers through participation in eTwinning and other projects whilst fame was not of great concern for him:

Well, I wouldn't say [we became famous] in the Municipality but in other areas...not in the Municipality...well, there is only one school in the Municipality so everybody comes here out of necessity... (Head teacher, interview 1)

Finally, Sofia did not acknowledge any drivers at macro-level but, quite the contrary, she argued that eTwinning was neither promoted nor supported adequately from the central authorities:

I'm under the impression that there not enough people to support it, what I mean is to go to schools and convince the teachers...What I mean is that the teachers who are involved... it's because you've really chased them up. (Sofia, interview 1)

Participation and expectations: pupils' perspectives

For many students the concept of eTwinning seemed appealing at first and they were attracted to the prospect of collaborating with another class online, travelling abroad and also receiving their partners at their school and homes. As Sanne described:

Some of them had tried exchange visits before or had been abroad. They found it interesting to visit Greek families and the Gymnasium. (Sanne, email interview)

Similarly, for the majority of Greek students the exchange visit was one of the incentives for participation along with their love for reading books and their desire to get in touch with foreign pupils. A major difference was that in case of the Danes the project was compulsory for the students as it was implemented within a school subject by Sanne whereas the Greek students took part voluntarily within the context of the after-school reading-club activities. However, despite their original excitement when the students embarked on the project this faded away as the time progressed and the engage with the different activities on TwinSpace:

When they presented me with the idea of accessing a site where you talk with another nation on a particular topic for example literature, love and so on...YES, I expected it a bit different!...I expected it would be more in the form of the commercial sites [...] The whole issue of the account was something I expected it would be very different –what I mean is that it's really difficult to access the profile of the person who is posting [...] If you want to check out who left a comment on something you uploaded you have to go through the whole list. (Nadia, 16)

The tools

The project was hosted on TwinSpace but, because it was configured in 2008, it was locked-in to using the old TwinSpace platform, and it was not been possible to move

to the new platform which featured web 2.0 tools such as a blog and a wiki. In this sense, the two versions of TwinSpace that case study 1 and 3 projects used differed significantly in terms of design as well as tools available allowing for an interesting comparison between the two cases (see various screenshots in both case study chapters and also Chapter 10 for further analysis).

In particular, in this case the two partners employed TwinSpace primarily as a means of uploading and sharing content related to the books they read and the topics they discussed and they mainly used the different forum categories configured by Sofia and Sanne. Other tools employed by the teachers were their external email accounts so as to arrange practicalities about the project and the exchange visits. Additionally, a small number of students migrated to other social networking tools such as Facebook and MSN for informal contact with their partners.

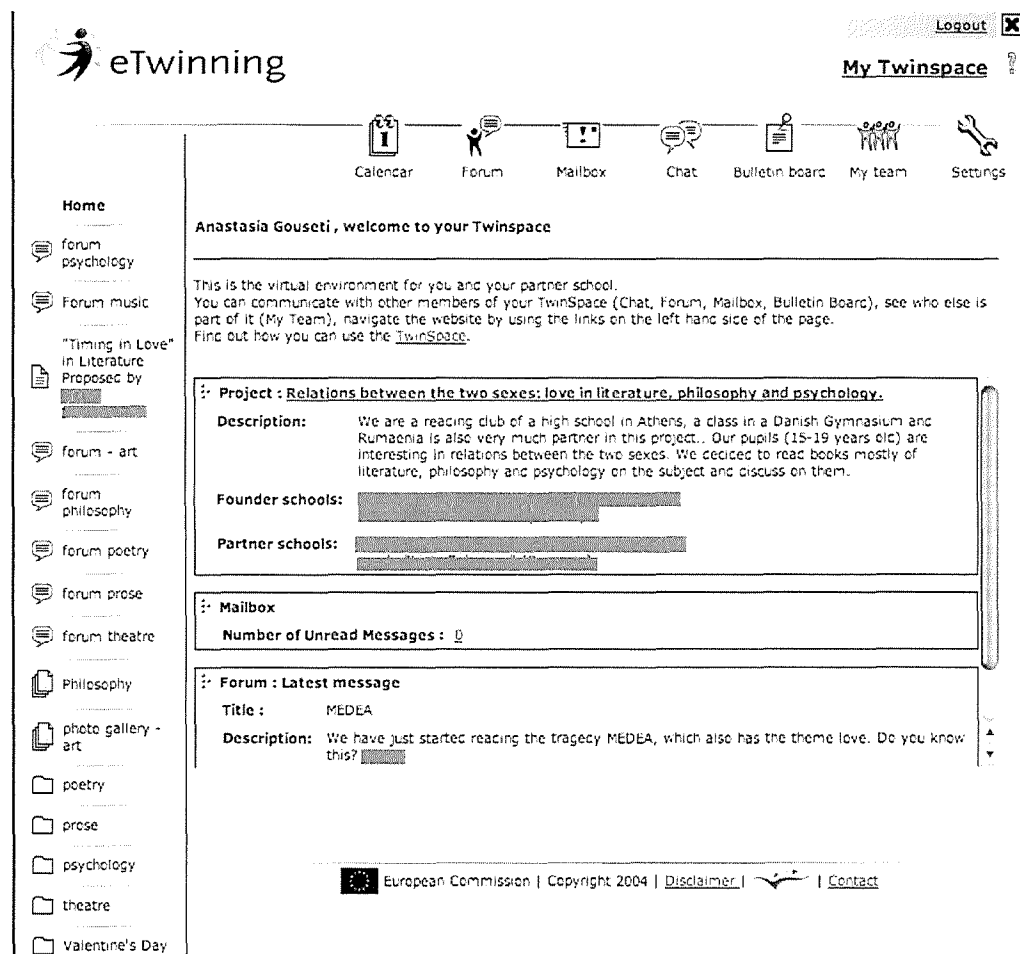


Figure 8.4: Screenshot of the project's TwinSpace (old version)

The journey: implementation of the project in practice

Integrating eTwinning in the reading club activities entailed both advantages and disadvantages for the Greek school. On one hand, as it was an extra-curricular activity there was no pressure in terms of devoted classroom time or exam preparation but the teacher had the flexibility to organise the project as she wished. On the other hand, this suggested that the students took part voluntarily after school on either Friday or Saturday afternoons and although a register was kept Sofia could not be very strict with attendance. Additionally, the students were preparing for the national university entry exams (equal to A levels) and their workload was heavy which made their attendance to the meetings and their online engagement even less regular. As Sofia reasoned:

They have a lot of obligations but students still come, even if they don't come every time, they come every other time, they don't disappear, they keep in touch. (Sofia, interview 1)

In addition, another drawback associated with the project running as an extra-curricular activity, was that the computer labs were locked and they were restricted to using the three computers available at the library. As this next excerpt illustrates, Sofia admitted that she felt insecure and did not trust her ICT skills in order to take the responsibility of using the school's computer labs.

...because many times there are breakdowns in the computers I don't want to ask for the key personally and to open the lab and be responsible for it...one of the students may cause a problem... and I don't want that... here where I can control them and I know things a bit better... I keep them here... we have two computers, we struggle with these two...other libraries have more [computers]... we, because of lack of space we have a shortage in equipment. (Sofia, interview 1)

Indeed, when the majority of the students described their in-school use of ICTs, they admitted that they rarely used the labs outside their ICT classes. For the purpose of eTwinning Sofia registered students on TwinSpace so that they could access the platform either from the library or from home. In reflecting whether this was successful almost a year after the start of the project Sofia reasoned:

All students have access even from home if they want. There are some students who use it more but most of them don't use it. What I mean is that if I don't...I have this problem... if you don't make them, if you don't tell them, 'come here, log in' they don't do it, you have to assign it to them. (Sofia, interview 1)

Sofia did not find setting up TwinSpace particularly challenging although it took some time before the practicalities regarding students' access were resolved:

...and there were so many students, we had difficulties with their passwords, they forgot them and then I had to re-register them...eh...I later realised that I could save their passwords whereas I have given them to the students to remember and they forgot them and we had to start all over again. The first phase was so tiring that I missed the chance to do a lot. But I think now, the second time, we'll do better, we'll be more focused. (Sofia, interview 2)

Conversely, Hanna was not able to register all her students and she found her experience with TwinSpace particularly disappointing if not frustrating:

I found the Ewinning tool very unsatisfied (sic) to use – it became confusing, where new materials were uploaded – and this made the communication heavy and in some ways uninteresting. A point of discussion might have started some week before anybody found it and would give a reaction. I now participate in a forum of Classical teachers and see, that the tools have been improved – but it is still not very clear in its structure and easy to work with. Difficult to get an overview. (Sanne, email interview)

The initial configuration of TwinSpace involved deciding on the different categories and setting up the relevant forum topics and file folders such as forum psychology, forum music, forum art and so on. A list of the range of forum categories and folders as well as part of the content of the 'Forum prose' can be found on the screenshot in Figure 8.5. As Sofia described:

I had a plan in my mind and I sent it to her [Sanne] and she made some corrections and she added some other things and we used the corrected version. So, the two of us communicated at first quite frequently before we set it up. (Sofia, interview 1)

eTwinning [My Twinspace](#)

Calendar Forum Mailbox Bulletin board My team Settings

Home

- forum psychology
- Forum music
- "Timing in Love" in Literature
- Proposed by
- forum - art
- forum philosophy
- forum poetry
- forum prose
- forum theatre
- Philosophy
- photo gallery - art
- poetry
- prose
- psychology
- theatre
- Valentine's Day

Forum:

Threads in forum				
Date	Title	Author	Replies	Actions
27-01-2010, 07:56	<u>Polyphemos tranformed.</u>		0	
07-01-2010, 12:12	<u>Lena Manta-biography</u>		0	
07-01-2010, 12:12	<u>Alexandros Zaousis-biography</u>		0	

New thread

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Figure 8.5: The discussion forum

More than a month after the project was launched and the TwinSpace had been configured there was a message posted by Sanne encouraging the students to edit their profile details so that it would be easier for everybody to get a sense of who was who.

Who is who?, [redacted] 08/02/2009

please write a little about yourself in your profile. We are so many, that at the moment it is not possible to know, who are the Rumanians, who are the Greeks and who the Danes. GO to the SETTINGS - EDIT YOUR DETAILS. If you also write a little about your interests, we could know a little more about each other. THANK YOU VERY MUCH!

Figure 8.6: Message on profile information

Interestingly, there was no direct response to this message, and the Danish teacher also posted a notice on the forum. Indicative of the early exploratory stages of the project was the Greek teacher's response almost a month later enquiring what the 'bulletin board' was (see Figure 8.7 below). Also, indicative of the initial excitement to engage with the project and to explore the various tools was the range of posts published in various online 'spaces' available on the TwinSpace platform as well as the number of posts and comments that appeared throughout the first three months of the project and were considerably reduced over the next year, in particular with regards to the Danish participation.

bulletin board
please se message in bulletin board

[redacted], 08-02-09, 08:30

Replies

More explanations...
[redacted] what is the bulletin board?

[redacted], 05-03-2009, 23:12

Figure 8.7: Reminder about message on profile information

Thus in the beginning of the project the teachers and some students showed a more active engagement to post messages and upload content in the different 'forum' categories as well as in the file 'archives' and the 'folders' without, however, demonstrating any particular coordination or coherence. Content ranged from book summaries and author biographies to photos and embedded YouTube videos with songs about love and Sofia described how she had guided the students in the beginning:

I told them if you want to look for some songs, of course I told them to find songs related to love and so on you should upload them in the art folder or was it poetry, anyway, I have given them some instructions as to where to upload them. (Sofia, interview 1)

This range in content combined with the very few comments was also suggestive of the lack of ‘common ground’ as regards the books read and discussed. There was a general, shared topic, which focused on love represented in literature, philosophy and psychology but this was too broad since no particular authors or literary genres were selected to be read by the participating partners. The Danish school was more focused on Ancient Greek writers whilst the Greek school was mostly orientated on contemporary literature. As Sofia reasoned:

They usually read ancient Greece, we happened to coincide in (reading) Plato’s Symposium. We analysed this together, some pairs we looked at in Iliad, in Odyssey [...] where we could coincide. Because we mainly read contemporary literature... I mean... contemporary... of the last two centuries... and contemporary psychology [...] And anyone who wants to post information uploads it in eTwinning. (Sofia, interview 1)

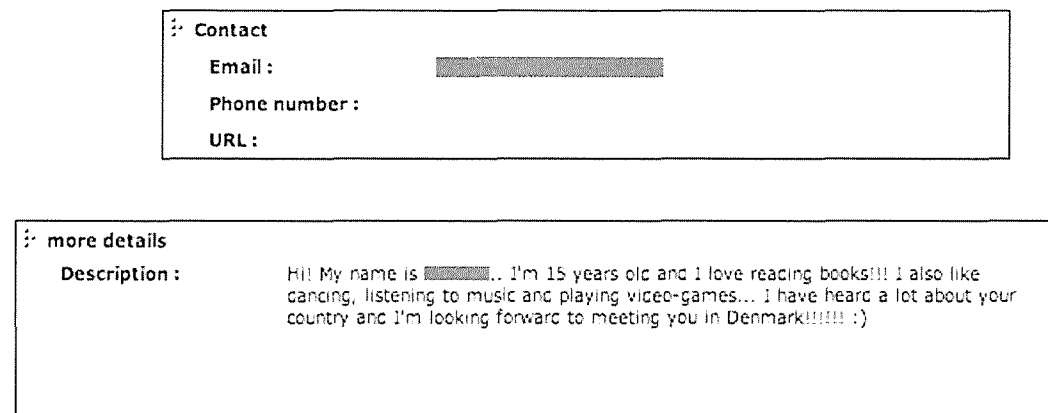
Another interest point to consider was how Sofia associated TwinSpace with the reading club activities only and did not view it as an appropriate platform to discuss the practicalities of their exchange trip. Additionally, she highlighted how much easier it was to use her external email account compared to logging to TwinSpace:

Of course the discussion about the trip was conducted through our personal email and not through eTwinning. All this correspondence about the itinerary and what we’ll do and all this, I don’t think it really fits TwinSpace, there’s no relevant space for such a thing, perhaps through our mail [the TwinSpace mail] but, see, we also used our personal email. At the end of the day all this accessing a different website, entering usernames and passwords is more complicated...well, more complicated, I mean it’s not part of your daily routine. (Sofia, interview 2)

Students’ profiles on TwinSpace

It is now worth considering whether students edited their online eTwinning profiles and what information they provided. Out of the 106 registered students 21 never accessed TwinSpace whilst 22 only logged in once. Although as we saw earlier the Sanne prompted the students to edit their profile, only one student from Denmark did so, succinctly adding the comment ‘Add me as a friend on facebook :)’. In terms of the Greek students, 24 students edited their profile adding more information about their age, family, hobbies and interests. A screenshot of a representative profile message in terms of both content and register can be found below (Figure 8.8). Only five girls provided more detailed information out of which four also uploaded a photo – one of these four also included her Facebook page link whilst the girl who did not upload a photo added a link for her account on MySpace. An example of one

of these profiles can be seen below (Figure 8.9). When accessing the ‘My Team’ page on TwinSpace apart from the names and –if available- more detailed profiles of all the registered users one can find out the number of times members have logged in. Interestingly, these five girls who created a more detailed and open profile were also the most active student members of TwinSpace both in terms of frequency as well in terms of range and amount of content they uploaded throughout the duration of the project.



Contact

Email : [redacted]

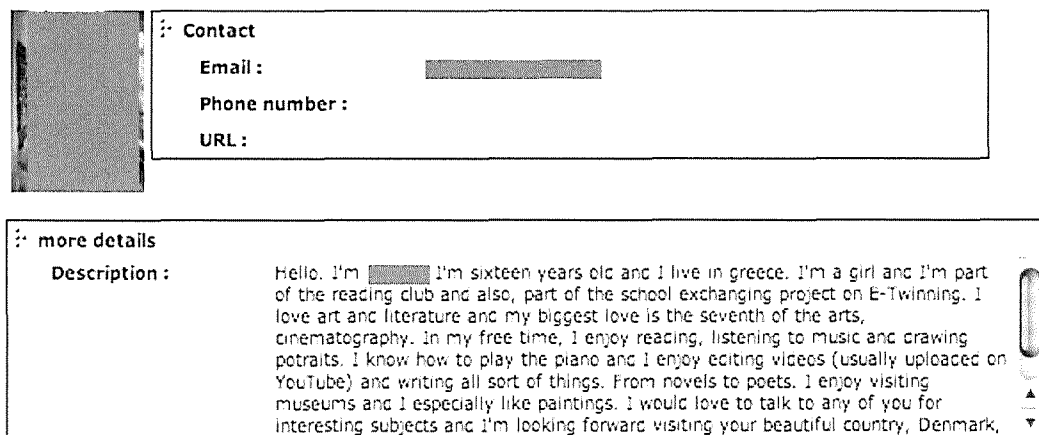
Phone number : [redacted]

URL : [redacted]

more details

Description : Hi! My name is [redacted].. I'm 15 years old and I love reading books!!! I also like dancing, listening to music and playing video-games... I have heard a lot about your country and I'm looking forward to meeting you in Denmark!!!!!! :)

Figure 8.8: Jane's profile on TwinSpace



Contact

Email : [redacted]

Phone number : [redacted]

URL : [redacted]

more details

Description : Hello. I'm [redacted] I'm sixteen years old and I live in greece. I'm a girl and I'm part of the reading club and also, part of the school exchanging project on E-Twinning. I love art and literature and my biggest love is the seventh of the arts, cinematography. In my free time, I enjoy reading, listening to music and drawing potraits. I know how to play the piano and I enjoy editing videos (usually uploaded on YouTube) and writing all sort of things. From novels to poets. I enjoy visiting museums and I especially like paintings. I would love to talk to any of you for interesting subjects and I'm looking forward visiting your beautiful country, Denmark,

Figure 8.9: Nadia's profile on TwinSpace

The Danish 'drifting away'

As discussed earlier, the project was set to last for two consecutive school years and the first few months had been quite promising with frequent interaction between the two teachers and relatively regular posts published by students and teachers of both

schools on TwinSpace. As Sofia described, at first she was worried her team would not be able to keep up with the pace the Danes had set and engage in equal terms:

Sanne put quite a lot time to it too, I'd say we both got quite involved [...] we made a very good start, there was collaboration and actually, I was thinking that we'll embarrass ourselves because we won't be very committed and they'll be more committed, I had this fear. Because they moved quite fast and they were the first to upload some summaries so...they started quite well. There was collaboration. We set everything up together [...] At first we exchanged some messages, she interacted more as a teacher but just for a while, then she started to ...drift away [...] Well, I didn't chase her up [rather indignantly]. She should have done it herself [participated more], well, what could I have told her? 'Post more'? [...] And the students, my students they got disappointed a bit, they said 'well, miss, they don't reply'. (Sofia, interview 3)

Although Sofia did not find it appropriate to confront her partner or chase her up with regards to her personal and her team's limited and sporadic engagement and participation in the eTwinning project, she also highlighted some of the external inhibitors that might have caused this change:

I get the feeling that Sanne didn't push them much, they were busy but she didn't motivate them to post, she let them quite loose [...] Well, the truth is that whenever we personally communicated through email and face to face she told me that she had time issues in dealing with the curriculum because they didn't have separate meetings but she tried to engage them in eTwinning within regular classes so she didn't have extra time like we did. As a result because she realised she didn't have enough time to complete her syllabus she kept neglecting eTwinning and they didn't do proper work, she didn't take it seriously, she wasn't that eager. (Sofia, interview 3)

On the other hand Sanne described how her students totally lacked motivation to work on the project on their own initiative and how she even had to persuade them to take part from the start:

Although my pupils' subject in the eTwinning was Ancient culture, I was able to persuade them to participate and write in English – 2 classes participated (16 – 19 years old) – one class begun the subject and the year after another class finished. They had to be pushed and persuaded to write – they did not do anything on their own initiative! [...] And they only wanted to work during lessons at school. (Sanne, email interview)

Students' lack of motivation was, thus, one of inhibitors that led to limited engagement with the project's online activities. However, a range of other inhibitors also attributed to the general outcome of the project and will be analysed in the next section.

Technical problems

As discussed earlier in this chapter a range of technical difficulties affected the course and outcome of the project. The limited functions of the platform, as well as the initial registration problems that both teachers faced and the complexity of accessing TwinSpace combined with limited motivation discouraged sustained participation to the project.

I think it's not very easy to use. Well, basically I tried to access it from home and it was a bit confusing to find what I was looking for. (Manolis, 16)

It's easy but boring. (Stathis, 16)

Additionally, throughout the duration of the project there were unresolved configuration problems that put off the students and as soon as their initial attempts to log in failed they lost interest:

Accessing the eTwinning site resulted in lots of error messages on many computers. It was really difficult to log in from some computers, there was a problem, I don't know exactly what it was but some couldn't get access. It was purely a matter of computer because you could access it from my friend's computer, I don't know exactly what happened to be honest. (Athina, 16)

Other technical inhibitors were associated with students forgetting either their password or the long TwinSpace webpage link whilst another student described the technical difficulties of TwinSpace opening in a new pop-up window:

The point where you enter the password is a bit problematic though. Because a lot of times some computers select not to allow pop-up windows, they think it's dangerous and you have to remove this restriction and allow pop-ups or whatever. Sometimes, the password does not work, in general there are some problems in logging in, after that there is no problem. (Anna, 17)

As Sofia described apart from the configuration and access difficulties getting the students to work on the TwinSpace platform proved challenging – perhaps unsurprisingly since they were accustomed to other less complicated and more attractive modes of online interaction:

What I would like is for the students to be able not to encounter the problem of not been able to access the platform straight away, this is really important as they get discouraged immediately, they are used to accessing everything instantly, in a flash, once they see it's problematic they give up...what I mean...eh...if it were more...eh...if it worked more properly. Now, if they could also embellish a bit the way it's presented so that it wouldn't be so monotonous and...like make it more attractive for the students. It is practical, that's true but it's not attractive...At the end of the day all this accessing a different website, entering usernames and passwords is more complicated...well, more complicated, I mean it's not part of your daily routine...(Sofia, interview 2 and 3)

Similarly, Sanne was also discouraged by the initial technical barriers that they had encountered and curtailed her students' use of site - leading to limited contribution partly to registration and access problems:

[The students found the use of TwinSpace] difficult – some could not use the platform – we never found out why... I think that I will suggest some alternative platform and only use eTwinning for finding partners. (Sanne, email interview)

Time issues

Bearing in mind that for the Greek partners the project materialised outside the school curriculum and that two weekly meetings were scheduled for the two groups of students respectively over the course of two academic years, the time commitment was great for everyone and in particular for the teacher. Sofia acknowledged how challenging it was to motivate the students to regularly attend these meetings and also how she did not always manage to complete everything during her office hours at the library but she often had to work from home at the expense of her family life as the project took up more time that she had originally anticipated:

[Some of the time I devote] is part of my office hours at the library...Many times I also have [to work] from home but for things, minor things. I try, so as not to have problems at home, to... because they scold me... they scold me at home a lot when I spend time on [...] it got really tiring last year, trying to coordinate the whole team and see what is everyone going to read and do and write and chase up all of them. It's so tiring that in the end you're exhausted and don't have the courage to do many other things. (Sofia, interview 1 and 2)

Some pupils work 15 – 30 hours a week after school – others only 4-8 hours. I personally find this a bad idea – and some pupils overdo this, so that they are not able to do their homework or are sleepy at school – and they can be expelled of school, if they get too bad marks because of their jobs. (Sanne, email interview)

Last, in terms of personal time Sanne described how participation in the project had taken up part of her free time, however, she did not express any complaints as she enjoyed what she did.

It did take some time to translate Danish lyrics and find literature and art, which could be understood also in Greece. But this was interesting to me. (Sanne, email interview)

Greek student engagement was also affected by time constraints and only a small minority accessed TwinSpace from home and devoted their free time on the project.

Still, as the following excerpt highlighted time problems might not have been so important had there been adequate reciprocity from their partners:

Well, I only used the platform a bit at first but then I didn't really happen to use it again. (Bill, 15)

Not many students from Denmark used it either so there was no point in us logging in and talking to ourselves or uploading songs for us. (Giota, 15)

Limited student motivation

As already discussed student motivation was one of the most critical factors that shaped the outcome of the project and despite the large number of registered students participation was relatively low. As reported earlier in this chapter, the number of Greek students, who engaged more, hardly reached twenty, whilst the numbers were even lower with regards to Danish participation. Sofia associated student engagement both with individual commitment as well as lack of reciprocity on behalf of their Danish partners:

Mainly it depends on how committed these students are towards the responsibility they have undertaken. However, if there was reciprocity from the Danish students, I think it would have worked much better. But even those who were more engaged, they logged in and uploaded things but nobody responded, for example, they would upload a summary of what we did or a comment and nobody replied and commented if they agreed or not, if what they posted was good or not so there was interaction and they gave up as well. Do you see what I mean? They got the sense it was one-way. (Sofia, interview 2)

Similarly, when the students realised that there was no mutual interaction even the more motivated participants lost interest and the number and frequency of posts decreased:

Well, let me explain, it's a bit problematic [the project] because there is no particular reciprocation, it's a bit sad...what I mean is that when I first started eTwinning I devoted quite a lot of time but then I saw they don't respond back so this makes you feel that you don't want to be that involved. (Maria, 16)

Students' in- and-out-of-school use of ICTs

Similarly to the two previous case study chapters, students' in- and out-of-school engagement with ICTs was reported to be commonplace rather than particularly sophisticated. The majority of the Greek participants described in the focus-group interviews that they used computers and the internet regularly (almost on a daily

basis or a few times a week) mainly for recreational activities, routine forms of communication and less often for homework. Recreational activities consisted primarily of accessing Facebook and/or MSN, listening to music and to a lesser extent downloading music and films, playing games and browsing a range of websites for news and updates. More sophisticated use of ICTs reported by individual students involved downloading films and synchronising subtitles (Markos, 16) and learning 'how to play some songs on the guitar' (Antonis, 16). Using the computer and the internet for homework was largely associated with looking up information on Wikipedia or search engines such as Google and typing up assignments. In-school engagement with ICTs involved the use of TwinSpace for the needs of the eTwinning project and using the school's computer lab in the framework of the ICT subject. The excerpt below was representative of the students' experiences with regards to both in- and out-of-school use of digital technologies:

Tania: I have Facebook, I download songs, I watch films, that's about it.

Stathis: We look up for information if we have a project, we chat with our friends on MSN, well...

Sakis: We play Pro.

Int: Do you get assignments from school that require computer use?

Sakis: Rarely.

Stathis: No, we get some, to look up words and information on some stuff.

Int: Do you use the computer labs at school besides the ICT class?

All: No.

Stathis: Because it's just this computer here and the internet is really slow, that's why, it's not very convenient but whatever.

(Focus group 6, all students aged 16)

Student engagement with social networking sites such as Facebook was also noted during the data collection visits. As described in the field notes below the majority of participants visited the school library regularly during their breaks and free periods and used the computer(s) available there – logging on Facebook was by far the most common activity whilst using TwinSpace was less frequent (see 'Field note excerpts from phase II').

Field note excerpts from phase II

Visit 2: 10th February 2010

I arrive at 8:45 am and there is just one girl using the computer in the library and she is on Facebook. The previous problem with internet connection has been fixed and the teacher later on

informs me that it was actually a student who sorted it out. Two girls come in shortly afterwards and they sit at the desk with the other computer. They also log in to Facebook and after five minutes the bell rings for a break and they log out and leave the room. Three other students come in later and sit at the main desk and chat. Nadia tells them about a video she has created, then they want to find a piece of info for a film and one of them goes online to check out the name of the director. My focus group interview follows. [...]

When I return to the library there are two boys at the corner desk watching videos on YouTube. Two girls and a boy are using the other PC checking out pictures on Facebook. The two boys leave the and the boy who came together with the girls moves to the empty computer desk.

The two girls leave and three other girls take their place. They open a Google webpage and look for a picture of a Calvin Klein model and chuckle. Most of them leave shortly afterwards but one of the girls stays and starts looking for a 'Twilight: The New Moon' desktop picture. The boy is checking out his Facebook account.

10:15-10:45 Interview with Sofia

During the interview two boys are playing chess and four girls are working on a school project at the big table. A boy (Kosmas) is using the computer but I can't make out what he's doing from where I'm sitting. The head teacher comes in at some point and asks him to check out for him online (basketball cups for the school team and games).

When the bell rings two more girls come in and use the second computer to check out Facebook. After the interview I cannot stay for very long and there is a whole class coming in to use the library in order to watch a video on the TV.

An example of a slightly more sophisticated computer use was observed during one of the visits when the internet connection was down. This involved editing a picture and saving it as desktop image in order to make fun of the teachers and students in it (see appendix 10: 'Field note excerpts from phase II').

Students' use of and engagement with TwinSpace

As already highlighted student use of and engagement with TwinSpace was rather infrequent and commonplace particularly with regards to interaction and collaboration – especially when taking into consideration the two-year duration of the project and the great number of participants. Although there was a range of entries posted under the different sections and the site appeared rich in content, the number and frequency of comments was very limited whilst the quality of the posts was also dubious. The following excerpt from a focus group interview is representative of how the students engaged with TwinSpace:

Aliki (16): We upload photographs, videos, usually songs that we write the translation, of course, if they're in Greek so that they can understand them, poetry, articles, reviews, etc, summaries of stuff we had discussed on Fridays here [...] We log in both from here and from home, it depends. Here it's more like an assignments, like, 'can you do something with the summaries and upload them there'? At home, it's like, how can I say it, if you are personally interested to upload something in your free time...

Int: Do the Danish students do the same?

Aliki (16): I have the feeling that they do it less often, I'm not sure but I believe so, their teacher mainly does the work. For example when I have uploaded things I see that the responses, the comments, everything is made by the teacher not the students.

Although students were able to use the library's computer(s) during their breaks and free periods, they did not log in on TwinSpace very frequently. This happened on very few occasions either when Sofia had given them a relevant assignment or on their own initiative to post YouTube videos of love songs on the website. Students' use of TwinSpace at school is described in more detail in 'Field note excerpts from phase I' (see appendix 11). Over the two-year duration of the project, discussion and postings on the forum covered a range of topics. One of the most popular TwinSpace sections was the 'Forum Music' with forty-two entries which consisted of embedded YouTube videos accompanied in some cases with a short description of the song and the lyrics in English and/or Greek (see Figure 8.10).

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Figure 8.10: Student post in the forum section 'Music'

Despite the popularity of this forum it should be noted that all forty-one entries were posted by Greek participants and there were very few comments. More than two third of these postings remained unanswered and out of these eleven comments all

but one involved correcting uploading mistakes such as re-embedding the video or adding the lyrics. There was only one instance of commenting when Sanne asked for more clarification on a song's title that was provided some months later by Sofia (see figure 8.11). This highlights the problem of lack of notification emails or RSS feeds. As students reported the only way to check for comments and new posts was by going through all past entries one by one.

Replies	Actions
erimou What does the titel mean: erimou? <hr/> [redacted], 10-05-2009, 09:35	
erimos= desert The title of the song is: "To tragoudi tis erimou", that means " The song of the desert" <hr/> [redacted], 06-11-2009, 20:52	

Figure 8.11: Comment on the 'Music' section of the forum

Forum Category	No of posts (total/students)	No of comments
Psychology	10/3	4
Music	41/29	11
Art	8/1	4
Philosophy	14/7	7
Poetry	16/3	8
Prose	29/24	10
Theatre	14/7	20
Total	132/54	64

Table 8.2: Activity on the TwinSpace forum

As the table above illustrates out of the total 132 posts only 54 were published by the students and out of these only 6 were initiated by the Danish partners. The majority of the 64 comments involved adding more information on the initial post by the same or a different author rather than instigating a productive discussion. The most popular category after the 'Music' one was the section on 'Prose' where the students posted summaries of the books they had read and discussed during the reading club meetings as well as the authors' biographies. The thread with the most comments (eight) was on 'Romeo and Juliet', however, discussion did not take off and only the Danish teacher participated in the thread. Most of the postings noticeably emanated from a dedicated 'core' of ten to fifteen Greek participants and

the online presence of the five girls who edited their profiles was dominant with regular contributions to the forum.

With regards to the other sections of TwinSpace the general forum was only used in the beginning mainly for 'housekeeping' posts whilst the 'photo gallery' folder was used to publish pictures of 'love in art' as well as pictures from the exchange trips and some student activities. As the students and Sofia described because they were using the old platform it was not possible to post pictures in the forum but only text and embedded videos whilst in the 'photo gallery' the pictures could only be organised alphabetically and it was not possible to leave comments:

The space for the images is elsewhere, there is a section called 'art gallery' and we upload the pictures which are all mixed up and then we use the forum where you can comment on something whose image is somewhere else [...] you can't have text and images together – it's a thing that we miss, perhaps they have improved it in the new TwinSpace platform. (Sofia, interview 1)

Collaborative writing and commenting

The use of the TwinSpace platform reflected a one-way communication mode of merely transmitting information rather than engaging in dialogue. As already discussed, the majority of posts were uploaded by the Greek participants and only at the beginning did the their Danish partners post a few comments whilst at the latest stages of the project during the second year there were almost no comments at all. Apart from technical and time inhibitors and lack of motivation this was also justified by the difficulty to find common ground with regards to the topics discussed as well as lack of interest in the choice of books. As one student described:

We read some books in the club that weren't particularly...it's not just being modern but be interesting... [they] were sort of...completely irrelevant...you had never heard of them before, they were from a particular Greek era, so...ok there wasn't much interest [...] The Danish students read ancient tragedies, so they tried to penetrate in the Greek culture but in the wrong way...well, not in the wrong way but differently from us. We on the other hand, did not read Hans Christian Andersen, we did not try to approach their culture, Danish culture and literature, so in practice it's like uploading comments that the others can't read because they are not interested deep down. (Alik, 16)

Copying and pasting

Analysis of the TwinSpace content revealed that the majority of posts were published by the Greek students and teacher. The students mainly used online resources such as Wikipedia for authors' and poets' biographies (see figure 8.2) whilst they also created more original posts of books summaries or translated poems into English.

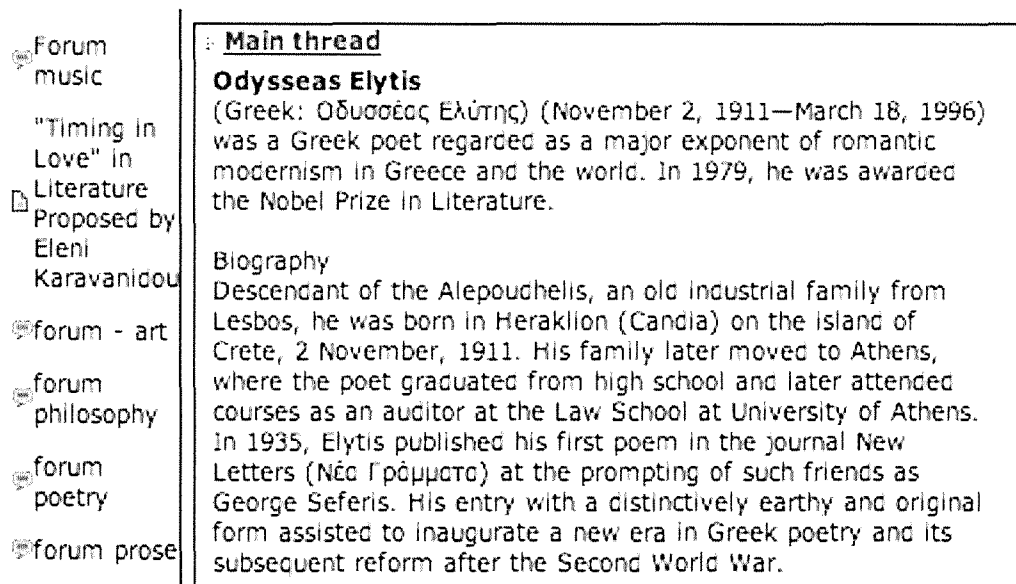


Figure 8.12: Screenshot of Elytis's biography post

As Sofia reported with regards to how students engaged with the activities and researched their online entries:

They looked for information on the internet, it's the easy way out, quite frequently when we were here we would consult a biographical dictionary from the library and we would comment on that but I'm under the impression that...well, they did read some information from there but when they had to write about it I'm under the impression that they went online again to look for information, they didn't bother typing it [from the dictionary], they went for the easier and fastest solution. (Sofia, interview 3)

Although, Sofia objected to the student practice of copying and pasting, she had to compromise since the project was not formally assessed but relied on the students' voluntary efforts. Additionally, she recognised the additional barrier of translating everything into a foreign language whilst the lack of participation and contribution on the behalf of their partners discouraged her students from putting in more effort. Additionally, as some students commented copying and pasting from online resources mirrored their general practices of completing school assignments:

We type in the topic of the assignment we have to do and we find information online.
(Kelly, 16)

Collaboration and communication

Within the TwinSpace platform communication took place at the discussion forums but at large it was focused on transmitting information and content rather than engaging in dialogue. As such there were no instances of collaboration between the two partner teams and no collaborative posts whilst commenting was sporadic and unexciting. The majority of students found the platform uninviting and unattractive and only a small core of more committed Greek participants logged in regularly to check for recent posts and upload new content. The two teachers used their personal email accounts to collaborate at the outset of the project in order to set up and configure their TwinSpace. At the later stages of the project, however, the Greek team experienced a sense of 'abandonment' when their Danish partners stopped contributing and disappeared from TwinSpace. As Sofia described with regards to reciprocity:

The first thing necessary for the project to work is reciprocity, well if you upload something and there isn't a single comment, even whether it was good or bad, just a simple comment, if you don't get a reply and there is no interaction eTwinning can't work [...] I expected that they would definitely respond and I thought we would be more problematic [...] but I feel abandoned now, you can't see them anywhere, nobody responds... (Sofia, interview 2)

However, some of the students found different - and more appealing to them - channels for communicating with their partners and developing online friendships. As highlighted in the excerpts below, after the Danish visit to Greece the pupils exchanged Facebook and/or MSN contact details and migrated there in order to keep in touch at more informal and personal level:

Eleni (16): They came to our school, we went out together.

Kelly (16): I chatted online.

Eleni (16): Oh, yes, through Facebook, MSN and all that. We kept in touch throughout winter [...] we talked about how we things are, what we will do when we visit them and so on.

Int: What about TwinSpace?

Eirini (16): [laughing] We don't go there.

Kelly (16): Yes, we talk mainly through Facebook and MSN.

The teachers were aware of the use of other social networking sites by students and as Sofia described:

They keep in touch but through Facebook only. They don't log on eTwinning, like, they haven't loved it, they don't feel it as their tool. (Sofia, interview 2)

Student migration to Facebook and/or MSN was restricted to the students who had met face-to-face during the exchange visits and did not cascade to the rest of the team. Additionally, no other tools for synchronous communication were employed since Sofia appeared hesitant and not confident enough to test her ICT skills to such an extent. Her insecurity was at large reflected in the following interview excerpt:

No, we haven't tried [to use the chat] because I don't feel comfortable about this, I don't know if I can handle it properly...eh...I would like some help regarding this [...] at home I have Skype and I use it to communicate with the other teacher but here I'll have to gather all the students and she'll have to gather her students and it would be great, it could be a determinant factor but I'm copping out [...] I don't know the technical difficulties we could face and...eh...it's something that I would need to have somebody by my side to do it [...] I have to bring my own laptop that has a camera, it's something we haven't tried, connect it to the internet...OK, if I felt really comfortable about this perhaps I would go for it, but because I don't feel comfortable and I fear everything will go wrong, I'm saying to myself, 'better leave it for another time'. (Sofia, interview 2)

Teaching and learning impact

The anticipated benefits of this project were largely associated with communicating with another school and exposing the students to the culture of the other country with the ultimate aim of organising the exchange visits. Enhancing students' language skills was also viewed as an additional benefit particularly for the minority who hosted and were respectively hosted by their Danish partners:

I think the students have actually benefitted from the programme, I believe that they already knew the technologies to a large extent [...]they realised they could communicate with another school online...they became familiar with this type of communication... Another benefit is that they get to know a different country... it prods you into getting to know a different culture, even the most uncommon let's say, that you've never thought of before [...] The fact that they had to do everything in English...this, I would consider the language the top benefit. The students who were hosted really benefitted because they had to speak [English], they spoke with the parents, the bothers and sisters so they were forced to speak because in general they are too shy to speak English [though] they have the fluency [to do so]. (Sofia, interview 1 and 3)

Similarly, the students who took part in the exchange and also communicated with their parents through Facebook and MSN felt that their English skills had improved:

Kelly (16): At first I didn't speak at all because...well...I couldn't communicate with them, I found it difficult but then I started ...

Eleni (16): We were also a bit shy...

Kelly (16): Yeah, we were shy...but then when we started talking I definitely saw an improvement in my English and I spent more time with them.

Eleni (16): Well, they speak English better than we do but...well...I was a bit shy to speak to them and I was stuck at the time but, like, when I met them and we became closer, like, I didn't have a problem.

With regards to ICTs the students did not report particular benefits since they found TwinSpace easy to navigate and did not feel they had learned anything new:

Int: Did you improve your ICT skills by using the platform?

Nikos (16): Well, we experienced something new.

Giannis (16): But we had the basic skills.

Other perceived benefits were associated with attracting lower-ability students to the library and motivating them to read books. As Sofia explained:

There is a percentage of around 20% who are good students, the rest, however, are average to bad. These students, I consider it a gain that they came [...] it may have been the first book they ever read and I hope not the last and that it's their first contact with books and the impression they have that books are somewhat depressing and bleak...there were some teachers here that told me 'no way this kid will ever read a book, no way s/he will present anything' and then we were stunned because they liked it I think, they like being involved. (Sofia, interview 1)

Conclusion

To sum up, this chapter has endeavoured to portray the eTwinning journey of a Greek secondary school and their partner school in Denmark. A range of drivers and inhibitors emerged from the analysis of the data associated not only with technical impediments but also with the wider personal agendas of the participating students and teachers as well as the educational structures and the micropolitics of the classroom and the broader concept of the school as an institution. Despite the range of technical and other barriers they encountered both teachers viewed their experience with the eTwinning project positively and the use of TwinSpace as a tool was not altogether rejected although some suggestions for future improvement were made.

The two exchange trips were seen as the most beneficial and engaging aspect of the project, particularly since online collaboration through TwinSpace did not flourish.

Contributing to the forum did not appeal to the majority of students and the lack of reciprocity on the Danish part resulted in TwinSpace being used mainly as an online publishing platform for one-way communication by a more committed core of students. However, other social networking sites such as Facebook or used MSN were adopted by a small minority of students to keep in touch with their partners.

Chapter 9: The Athenian inner-city school case study

The school

The school was a mixed-gender, non-denominational, urban vocational school located in a central area of Athens. The area is considered to be middle/working class and has attracted a large number of immigrants. This was the only vocational school in the Municipality and consisted of 213 students specialising in the fields of mechanical Engineering, Electrician, Information Science and Networks, Economics and Management and Health and Welfare. Due to areas of specialisation the school boasted a range of labs and facilities whilst eTwinning projects had also been organised in the past.

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Figure 9.1: Athens inner-city school

The aim was to work on the project in either of the three computer labs or the school's library. However, the library room was a rather small and uninviting room that was not very often frequented by students. As described in the field notes:

Field notes from visit 3: 14 April 2010

There are two computers for students located at the far left corner of the library and there is another one at the librarian's desk on the right-hand side of the room as you enter. The internet connection does not work – it hasn't worked for quite a while as the students tell me. The librarian appears to be frustrated that the students have told me so. She is a middle-aged lady who doesn't seem to be on particularly good terms with the students. She tells them to go and ask the ICT teachers to come and fix the internet connection, the students do so but nobody shows up. She gets even more frustrated and goes to fetch them herself but she comes back on her own as they claim they are extremely busy.

The library does not seem to be inviting at all, it's a rather sterile, dark and unfriendly place. The two desks hosting the computers must be the most uncomfortable desks ever as you can't write properly

or use the mouse without hurting your lower arm - the edge of the desk is not even but it sticks out about half an inch over the surface!! Using the computer almost seems like a punishment. On top of that the computers are not on standby but switched off and the librarian has to provide an extension cable in order to be able to plug them to the power socket. When we finish we have to switch them off and give the cable back to the librarian. The students have saved the files on a computer folder so when I go back to the teacher's office and tell her she asks me if I could go and copy them on her flash disk. I go back to the library and the librarian has to give me the extension cable again. So I plug the computers to the power, switch them on, copy the files and switch them off again and unplug them to return the extension cable. And this is the school's library!!! When I ask the librarian she mumbles something about the pupils messing up with the computers and I don't insist more.

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Figure 9.2: Athens inner-city school library (the computer 'hub')

The eTwinning project

The project was designed to run for the school year 2009-2010 on a voluntarily basis and the teacher had hoped to attract the interest of a range of students from the school. There was no assigned time within the curriculum for the project so meetings were expected to take place on a weekly basis after the end of lessons. Data collection was carried out during 2009-2010 and took place over three consecutive visits. The eTwinning meetings were not fixed but ranged throughout

the year and so did the number of the participating students – this kept changing during each research visit with only a couple of students forming the core of the team. The basic information on the project as described on the official TwinSpace page can be found in the table below and according to the Greek teacher the topic was selected with the aim to compare and discuss students' perceptions of their vocational education school and their aspirations for the future:

...this year in my project they will find out how schools over there [in Italy] are. And because our partner is also a vocational school, they will discover how their lessons are, similarities and difference, what these children do with their school certificate, do they go on to university etc etc. (Eirini, interview 1)

eTwinning project: My studies, my future*	
Subjects	Cross Curricular, European Studies
Languages	EL [Greek] - EN
Pupil's age	16 - 20
Tools to be used	Chat, e-mail, Forum, MP3, Other software (Powerpoint, video, pictures and drawings), Video conference, Web publishing
Aims	Objectives of program are: 1. Is searched the educational system of secondary education of each country in the sector of professional education. 2. Becomes comparison (differences resemblances) the analytic programs of each order. 3. Is searched the motive of choice of professional lyceum and professional faculties. 4. Become special reports in the specialities that function in each school as well as in their analytic program. 5. Becomes research in the job market for professional re-establishment of graduates in the local society, in the country more generally, but also likely in the European Union
Work Process	Timetable of concretization of program • October-November 1. Acquaintance of students of schools and exchange of ideas on issues choices of professional orientation. 2. Creation of first research for the educational system of each country. 3. Presentations of each country of material that it assembled. • December-January-February 4. Presentation of specialities of each school choices of students. 5. Research in the job market 6. Interviews from professionals in the space of market. • March-April 7. Professions that were lost in our countries and other that are still maintained 8. Final presentation
Expected results	With this project the students will be informed for the educational systems of schools of each country, will discuss their choices in their study, they will search the job market, they will be practiced in the use of new technologies and they will have fun through the activities that they will select.
*Information copied from the official eTwinning page – therefore, all incorrect or unusual spelling and phrasing has been reproduced here	

Table 9.1: Summary of project (source: eTwinning platform)

The project partners

The project idea was conceived by the Greek teacher, Eirini, and her Italian partner, Miriam. They had already collaborated before on other eTwinning projects so they

were both fairly experienced and well acquainted with each other. The two teachers had initially met online through the eTwinning platform. Additionally, both teachers were content with their collaboration and had met face to face when the Italian team had visited them during their first project in 2007:

They had visited us three year ago. They were given some thousands euro and they came and stayed for five days. They came to our school, unfortunately our school then was being refurbished and we couldn't host them as we had wished but it was ok, we went out in the evenings, we showed them around, we did whatever we could anyway. And it was the first time we came into contact with another school...exchanges and such things are difficult for schools because of the financial difficulties. Anyway, that year we were running the project on recycling, the project was called 'recycle, way of living'. (Eirini, interview 2)

The Greek participants

Eirini described herself in her eTwinning profile as a 'technician of medical laboratories and I teach courses that concern medical directions in the laboratories as Anatomy, Hematology, Microbiology etc. (sic)'. She was in her late forties and had had long teaching experience:

I started teaching in secondary education in 1993 and this is the fourth year I'm taking part in eTwinning...this is our third project. (Eirini, interview 1)

As highlighted above this was the third eTwinning project for Eirini and she was fairly confident in her ICT skills. In 2007 she had created a blog that hosted information and updates with regards to the eTwinning projects she had been involved so far and she also made frequent use of 'eClass' an online platform where teachers can upload supplementary material for their students to access. As she described:

The 'eClass' is nothing exceptional but it's very convenient for me...I upload all the material for the lessons so if somebody has missed a test...well, here it is...go online, download it and here you go...the 'library' is there, [the students] can access the webpage and download it. It's also a sort of a safety net. Eh...my flash disk broke down and I lost all my data and files, all my [power point] presentations. Thank God I had uploaded everything there! It saved me! (Eirini, interview 2)

The Italian partners

The Italian partner school was a vocational school located in an urban area in the east coast of Sicily offering students specialisation as dental technicians, electronics, electricians and thermal mechanics. As Miriam described:

The school is in the northern zone of Catania, Sicily. It is a technical school and mainly boys with a small amount of girls.[sic] There are approximately 900 students. Many of the students come from a low social background, they can be difficult to deal with at times so as a school we look to open their minds and give them a better start in life. (Miriam, email interview)

With regards to the school's objectives, special emphasis was placed on promoting foreign language and ICT skills through participation in EU projects. As the following excerpt from the school website demonstrated that some of the aims were to:

Pay attention to foreign language (English) through the implementation of European projects such as Comenius and eTwinning with the assistance of native teachers to help students to communicate in English with their peers from schools in Europe...the use of information technology through the activation of additional courses for the acquisition of the ECDL and ECDL-CAD to be achieved within the Institute as the AICA authorized test centre. (School's website)

The Italian teacher, Miriam, had been teaching in secondary education for twenty years and was a teacher of English. She had taken part in eTwinning before and had been previously involved in two other projects with Eirini. As she described in her eTwinning profile:

I teach English in a technical school and I enjoy my work. I always try to improve my activities and I am keen to try new methodologies. This year I have two very helpful language assistants from England and Ireland. My students and I are happy to work on new projects and we enjoy teamwork.

(Miriam, eTwinning profile)

Apart from two previous projects she had organised with Eirini she had also been involved in other eTwinning and Comenius projects in the past and had visited Greece and France within the framework of these projects. With regards to the project 'My future, my studies', Miriam commented:

It is implemented into the English and Italian language lessons, it is not extracurricular, although sometimes the students can work with the project outside of their school time...Our students are aged from 14-19. We select the students from various classes that are willing to work hard and contribute to the project. (Miriam, email interview)

Drivers for participation and initial expectations

The pedagogical opportunities of eTwinning, the use of ICTs for communication and collaboration and the potential to meet students from foreign countries was what attracted Eirini to eTwinning at first:

I heard about eTwinning online, then I attended the briefing seminars...I thought it would be interesting if they met students from other countries and talk with them... eTwinning is a different method of teaching...a different teaching pedagogy, it approaches a topic differently...eh...mainly interdisciplinary, the students usually select the topic they'll work on, it's student-centred. The other advantage of eTwinning is that you can get to know students of the same age who live in different countries in Europe, you can learn about their lives, their studies and because we have collaborated with a vocational school they had more or less the same perspective. (Eirini, interview 1)

For Miriam the key impetus was collaboration with a foreign school and the use of English and ICTs for communication:

Because we wanted make contact with other Europeans, use the English language, share ideas and opinions, and experiment with new methodologies. (Miriam, email interview)

In particular, eTwinning was seen by both teachers as a pedagogical resource capable of providing alternative ways of approaching teaching and learning:

They [students] can improve their language skills, computer and communication skills. They were involved in some good team work activity, which is crucial for everyday life. (Miriam, email interview)

Getting acquainted with new technologies, interest for the lesson, stimulation and socialisation within the school. (Eirini, interview 1)

At a personal level, Miriam found participation in eTwinning meaningful and beneficial since it enhanced both her methodology and relationship with students:

I improved my methodology and my rapport with my students. It is a rewarding project when you can look back and see that it was worth it. (Miriam, email interview)

Similarly, Eirini also reported that eTwinning had benefitted her at a personal level and retrospectively, she felt more confident with regards to her English language and ICT skills:

Eh...personally I have improved my English skills, apart from meeting exceptional colleagues from other countries in the EU, I have improved both my language and ICT skills. I had to become involved with very many things, with videos, with presentations, with the internet, msn and all these tools I've used. (Eirini, interview 1)

With regards to benefits at school level, Eirini appeared to have mixed feelings and was more sceptical as to whether the moral reward deriving from a nomination for

the eTwinning awards for their previous project was a sufficient enough motive. She mainly wished for a more tangible type of reward such as funding to organise an exchange trip for her students:

It's just that some people who are aware of these programmes and saw that we have got a couple of awards, said 'well done guys', that's all...Yes, a moral reward from whom? From acquaintances... the state should supply a small funding to the projects granted these awards so that the students. (Eirini, interview 3)

Conversely, Miriam did acknowledge school-related benefits mainly associated with gaining local popularity and feeling more integrated in the European community:

We feel like we have become more of a part of the European community. We were in the local newspaper with past work so it is good for our reputation. (Miriam, email interview)

At school level Eirini did not acknowledge any particular drivers that triggered her involvement with eTwinning apart from the moral support of the head teacher. In terms of infrastructure she was content with the school's computer labs and the help she had received from her colleagues in the past:

I haven't needed any help so far, there was a time when our Italian partners were going to visit us and the colleague who teaches English helped us with the translation and also another colleague who had studied in Italy and could speak Italian, talked to the students in Italian because the students are not very good in English...but in general there are no obstacles within the school. The head teacher also helps us to carry out these projects. (Eirini, interview 2)

The head teacher confirmed his supporting role towards student and teacher participation in such collaborative projects, however, as he had only been appointed in that post in January of 2010 he was not very familiar with Eirini's eTwinning activities. Still, having studied at a Swedish university himself and taken part the year before in an exchange trip in Finland at his previous school he viewed positively such experiences and also actively encouraged the use of ICTs:

I definitely think that such programmes are good for education, there's no doubt about it. I'm in favour of such programmes because they will offer something good to the school. In my previous school we have seen huge benefits from such programmes...Well, it reflects on the teacher first of all. It's import for them to be involved in such programmes because it's a sort of training for them. It can really help a lot. (Head teacher, interview 1)

Miriam not only had the support of her colleagues but had also received financial funding from the school so that they could carry out the visits in Greece and France during the previous projects:

An Italian language teacher also helps a lot with the project. Other teachers cooperate if we need the students to work on the project. Also, the school helped financially. The funds from the school are used for school trips. (Miriam, email interview)

At macro level, no stimuli for participation deriving from the eTwinning central authorities or the national Ministry of Education were reported by Eirini. However, Miriam highlighted that she had received adequate support and training from the eTwinning national authorities:

They organised various seminars and helped us to prepare for them. They were always ready to respond and help us. (Miriam, email interview)

Participation and expectations: pupils' perspectives

The major appeal for students that triggered their participation in eTwinning was the prospect of an exchange visit as well the idea of communicating with pupils from a foreign country:

That we would talk with others, that we would work on assignments, that we may go... the aim would be to go on an excursion for entertainment, so to say. (Costas, 17)

Well, I had taken part in similar programmes before and, like, I thought it would be nice...and it's nothing too big or difficult. (Aris, 17)

Although the students had some formed ideas of what the objectives of the project were, interestingly they appeared oblivious of who their partners were and the teacher contributed to this by simply making vague promises that they would visit 'Rome':

Aris (16): Well, I think mainly this programme has been created in order to get acquainted with other countries, depending on where we would go to or where we will go to, I don't know.

Nikos (16): So that we can speak with children from abroad, to learn about their school activities, how they do their classes.

Fotis (16): We learn new things. We might, like, go on a trip with the programme.

Int: Where to?

Nikos (16): To Rome.

Int: Why to Rome?

Nikos (16): The teacher said so.

Int: Which is the school you collaborate with?

Aris (16): We don't know. Ms has arranged that, we don't know.

The tools

Although the two partner teachers had used external tools such as wikis for their previous eTwinning projects, they decided to employ TwinSpace for this project. This decision was based on the recent ‘refurbishment’ of the eTwinning platform, which made the use of the wiki tools possible. However, as it will be further discussed this decision did not have the intended effect. Other than TwinSpace Eirini and Miriam employed their external email account, Skype and Facebook as a means of organising the project and keeping in touch.

The project was initially registered on the beginning of October 2009, however, apart from a few ‘icebreaking’ introductory messages on the wiki and the blog posted by the two teachers no other content was ever uploaded. Throughout the three research visits the Greek teacher would discuss future plans as to what they would do, she would assign pupils with tasks, however, nothing materialised in the end. The screenshot below shows the configuration of the wiki, however, most of the tabs such as the ‘Staff room’ and the ‘Pupils corner’ as well as the different sections under the ‘activities’ remained without content with few exceptions that will be further analysed.

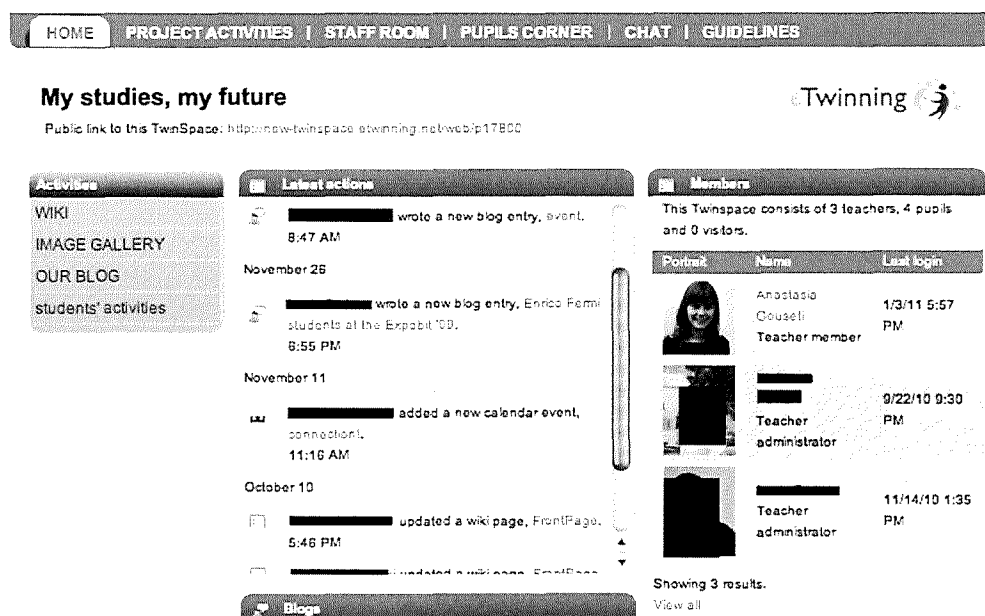


Figure 9.3: Screenshot of the project's TwinSpace

The folder ‘Image Gallery’ contained sixteen photos of the school uploaded by Eirini and indicative of the initial enthusiasm was a picture that showed the students working on TwinSpace at the computer lab– this was actually taken during my first observation when the teacher registered the students and showed them how to use TwinSpace.



Figure 9.4: Picture from class observation 1

Similarly, the wiki included only one entry posted by Eirini during the first stages of the project and it was a welcoming message towards the Italian partners.

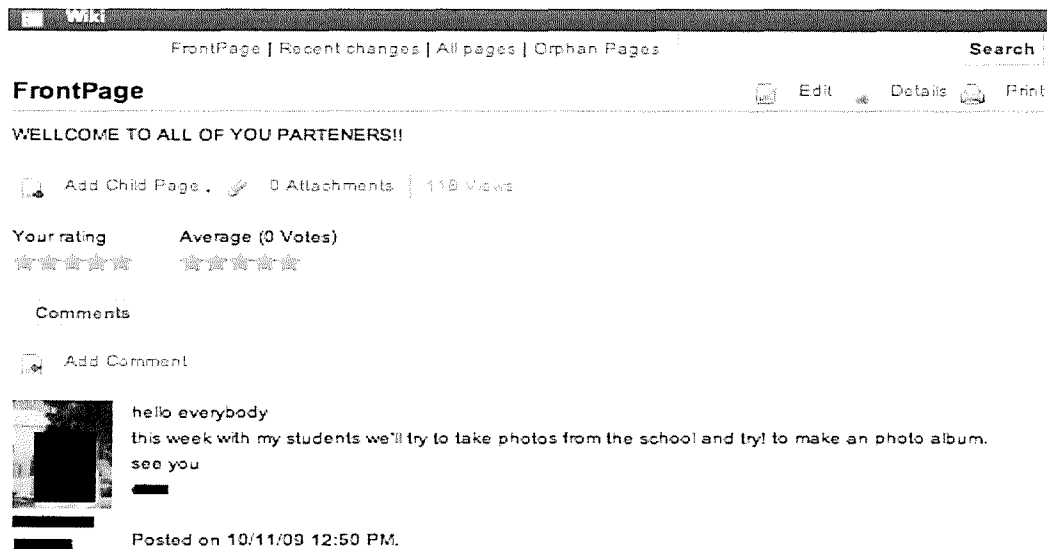


Figure 9.5: Wiki entry

Only two blog entries were posted by the two teachers respectively and described the activities of the two teams in the period November-December 2009, namely visiting and presenting their work at an exhibition in Italy and taking part in an online discussion organised by the Greek Minister of Education.

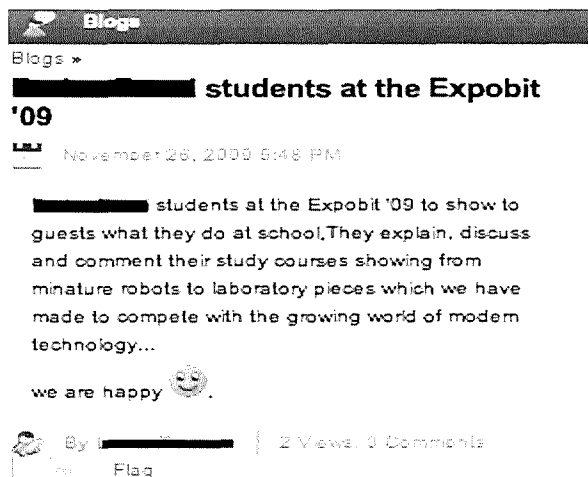


Figure 9.6: Blog post by the Italian teacher

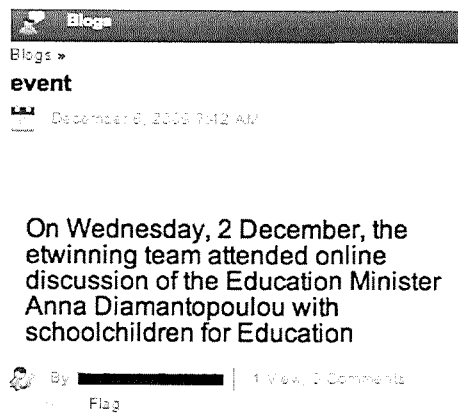


Figure 9.7: Blog post by the Greek teacher

The journey

The eTwinning project for the Greek team did not take place within the framework of a particular taught subject but involved the participation of a small group of students and was set up as an extra-curricular activity where learner participation was voluntary rather than coerced. Initially during the first phase of data collection only four students had expressed interest and were present during the class observation. These were registered on TwinSpace, however, only one of them managed to log in and access the platform. My first observation coincided with their first eTwinning meeting and their registration and introduction to TwinSpace was underpinned by a range of technical difficulties. One of the major problems was that although the teacher followed the same steps in order to register all students and their names appeared on the list of ‘student members’ they repeatedly attempted to log on the platform but their efforts were unsuccessful. A more detailed description can be found in the field notes below:

Field notes from visit 1: 11 November 2009 (10:00-13:00)

Eirini explains to the students that the discussion between them will take place in Greek and then they will translate everything into English. She goes on to explain to them briefly what a wiki is as this is the tool they will be mainly using for their eTwinning project.

10:20: Eirini tells them a few basic things about how the eTwinning platform works and then she logs in to her account from a PC and gathers the students around her so that they can see how TwinSpace works. She shows them the project they did last year on the old TwinSpace platform which she admits to the students ‘was easier than the new one, the new one is a disaster’

....

The teacher then opens the TwinSpace of the current project and show them the wiki which is totally empty of content apart from one posting made by her a couple of weeks before. The teacher invites

the students to TwinSpace by adding their names so they can get usernames and passwords...The students write down their usernames and passwords and the student with no previous internet experience seems a bit lost... Eirini checks TwinSpace and sees that the system has registered some students twice whereas Costas does not appear to be registered, so she goes back to the settings in order to fix it.

By 10:45 the first period of the meeting is finished and the bell sounds signalling break time. Melina takes the break and goes outside but the other three students do not leave the lab – instead they use the computers to log on Facebook so that they can download photographs from their personal accounts and use them for their eTwinning profile. The teacher has a digital camera and she also takes pictures of everyone in front of the whiteboard where she has written their names over a little arrow pointing at them over their heads.

At 10:55 the bell rings again and Melina returns to the lab. The teacher asks them to log in to TwinSpace with their new username but although some of them manage to log in to the eTwinning platform the TwinSpace will not open automatically in a new page like it normally does. They try from both the Greek and the central platform (etwinning.gr and etwinning.net) but they all get a message that they do not have TwinSpace access. Both me and the teacher can see them as registered members of the project when we log in from our accounts but the problems persist and there is no way they can access TwinSpace. It seems like their initial enthusiasm turns into frustration as they attempt to log in repeatedly.

During the next week the problem with TwinSpace access has not been resolved so it is not feasible to organise another class observation at the computer lab before I return to the UK.

Despite the initial enthusiasm of Eirini these technical difficulties combined with a range of other hurdles that will be analysed further on resulted in a let-down and eventually both teachers gave up on the project and stopped updating TwinSpace. Interestingly, during the consequent research visits and via email communication throughout the year Eirini would be pointing out the difficulties they were facing without actually admitting defeat – each time she would turn a blind eye on the situation and would describe their future plans as if they were actually still going ahead with the project. In reality, the Italian students were never registered on the platform, no communication or collaboration was established between the two teams and no content relating to the topic was ever posted on TwinSpace or anywhere else. During the second phase of the data collection in February, things proved even more chaotic and Eirini did not manage to organise a class observation or a second round of focus group interviews with the students. Still, when interviewed she described how they were planning to go ahead:

We've decided to start working on this because a lot of time has gone by and so after we prepare this text we'll see what to do next. One idea on what to do next is that each student will choose two or three professions he likes and present some pictures on a power point or a video, pictures or whatever each student wants on the profession he likes... Yes, we will upload it, all together with the students. We'll arrange a meeting after school and upload them. Each student will be assigned a particular task because it's the only way we can continue and move on. (Eirini, interview 2)

During the third phase of data collection and despite the total lack of activity on TwinSpace, Eirini had arranged another class observation at the school's library. Only four students were present though whilst Eirini was absent as she was too busy on that day with unforeseen administrative duties. The students appeared totally unfamiliar with the platform, only one of them was registered but had lost his password whilst the others were not even registered:

Int: So have you ever logged on the platform to see what the website looks like? I remember you, Nikos, from the first visit when you were registered for the first time.

Nikos (16): Yes, she gave us the passwords but I forgot it and Ms had also discarded them and we had to start from scratch again to be registered and then she didn't give us another password.

Int: Do the rest of you have a username and password?

Aris (16): We don't have one.

The result was that throughout the observation the students worked on Microsoft word so as to create a short text about themselves and their professional interests. As the students described, they had already written them before but their teacher had lost them and they had to re-write them on the day of the observation. As the interview excerpt below demonstrated there was a sense of chaos and lack of organisation implicitly attributed to the teacher:

Aris (16): Well, we were given some papers and we had to translate them from Greek to English.

Fotis (16): Did these get lost?

Aris (16): We were told that we would send these papers later on.

Int: What sort of papers?

Aris (16): Some questions.

Fotis (16): They were about our school...what we're into...What we enjoy at school mostly.

Sakis (16): Which subjects we find difficult...which we find easier and...

Fotis (16): We first wrote everything into Greek...and then in English.

All: We had everything ready and we had left it here.

Fotis (16): Then Ms Politaki took them...

Nikos (16): She lost them.

During that observation the students wrote a brief description of themselves, their school and their future aspirations, however, these were never uploaded on TwinSpace. No other activity took place before the end of the summer term and this eTwinning project ended rather unfruitfully. During our last interview, Eirini on one

hand continued making future plans for the project but on the other hand she appeared to have realised that her initial expectations had not been met:

I want to find time to upload the students text online so that we can say we did something at least in dignity and to work on some statistics I have prepared on who will go on to higher education...Well, the truth is we got caught up with preparing the Comenius...In the meantime because Miriam was away on meetings a lot of the time because she was involved in a Comenius before...eh...she didn't respond much either. And I haven't spoken to her for a long time. It wasn't a good year. (Eirini, interview 3)

With regards to the Italian participation no student members were registered on TwinSpace and Miriam's contribution consisted of the single blog post presented earlier and the configuration of a wiki front page that remained empty of content.

Students' in- and-out-of-school use of ICTs

Similarly to the three previous case study chapters, no exemplary in- and out-of-school engagement with ICTs was reported here, although the small number of participants in this case does not allow for any generalisations. The majority of students reported using a computer and the internet regularly (almost on a daily basis or a few times a week) mainly for recreational activities and less often for homework. Recreational activities consisted primarily of accessing social networking sites such as Facebook, MySpace and/or MSN, playing games, listening to music offline or on YouTube, and browsing a range of websites for news and updates. Only one girl reported not having internet access at home and not being familiar at all with using online applications and sites:

Costas (17): For internet games, for (software) programmes, for email, eh and for school homework, to access the internet and look for information...

Nikos (16): I use it for Facebook, MSN, MySpace... and for school homework, eh, for games too, and to keep myself up to date, to listen to songs on YouTube, to check out Filathlos [online Greek sports newspaper], for all that...

Melina (16): I'm not into that, no, at home where I have a computer but I don't have internet access I only listen to music, that's it.

With relation to homework the majority of students largely saw the computer as a means of looking up information on Wikipedia or search engines such as Google and typing up assignments. In-school engagement with digital technologies was only reported within the framework of ICT school subject and mainly involved learning how to use Microsoft Office applications such as Word, Excel and PowerPoint. The excerpt below sums up students' experiences with regards to their school related use of ICTs:

Nikos (16): We are taught how create PowerPoints, Excel, we type texts...

Fotis (16): We type assignments...or to search [for information] online.

Aris (16): For homework...for a history assignment...

Interestingly, the same students, who appeared to be close friends outside the school setting, reported engaging in informal, out-of-school, peer-learning activities with regards to improving their ICT skills:

Aris (16): I do the same because more or less we use computers together with the guys.

Fotis (16): No, we started using the internet all together, like, at the same time...and whatever one knows, we all know... If one of us learns something we tell the other.

Technical inhibitors

In reflecting what contributed to the project not achieving the desired end, a range of issues can be identified that inhibited the expected outcomes and contributed to the initial goals not being realised. As outlined below apart from the more prosaic and matter-of-fact impediments such as technical difficulties and time issues, other more complex and multi-faceted factors also affected the final result. As discussed earlier in this chapter, a range of technical difficulties emerged at the first stages of the project and affected its future course. During the first months and also throughout the year Eirini reported that she found the new TwinSpace particularly challenging to use and was not able to configure and use the wiki tool as she had initially expected. Although she was confident about her computer skills and had used blog and wiki tools in the past, she found using TwinSpace particularly confusing. With regards to her unfamiliarity with TwinSpace and when questioned whether she could attend an eTwinning training seminar or use the online guidelines for the new platform, Eirini highlighted two further issues: first, that the guidelines were only available in English in those early stages and second, that time and travelling limitations did not always make participation in seminars possible:

The workshop both for beginners and advanced teachers takes place on the same day, the 16th December in the Intercultural Centre of Orthodoxy in the Penteli Monastery. And I want to give her a call, this girl, Ms X... she's been greatly involved in eTwinning. And... I want to give her a call and ask her 'who is coming all the way to the Penteli Monastery?' There are some instructions in English...but I have to sit and study these and I didn't have time. (Eirini, interview 1)

Moreover, Eirini faced problems registering her students as was highlighted earlier whilst her partner, Miriam, was not able to log on the new platform at all.

The other problem we have, me and my partner, is that she can't log into her TwinSpace...I will give somebody at NSS a call to ask them if there is indeed a problem with the platform because in Italy at the moment the TwinSpace doesn't work, the teacher can't even access it and she will send me her work so that I will upload it using her username and password but that's not collaboration that's a torture. (Eirini, interview 1)

On the other hand, Miriam, in her email interview, argued that Eirini was the one facing problems with TwinSpace and not her team and, when asked why they did not choose to migrate to the external wiki they were already familiar with, again she passed the responsibility on to her partner:

Miriam: Our partner is having problems with the new eTwinning website, it is more difficult to use.

Int: Why didn't you use the same external wiki again this year?

Miriam: Because we haven't started on the project yet, we are still just at the discussing and planning period. Also, as mentioned before, Greece haven't (sic) quite worked out how to use the platform yet.

(Miriam, email interview)

Conversely, during the first phase of interviews when Eirini had a telephone conversation with Miriam and I had spoken to her briefly she had admitted that they were also facing access problems. Additionally, even if it was only Eirini who was facing technical difficulties Miriam could have set up TwinSpace and started contributing but this never occurred and neither were the Italian students ever registered on the platform. Thus, both parties appeared to renounce responsibility and these initial technical hurdles were never overcome but they curtailed use of TwinSpace and discouraged any sustained participation to the project.

Time issues

Apart from the technical difficulties that emerged, a range of time issues also contributed to the failure of the project. Bearing in mind that at the Greek school the project materialised outside the school curriculum, great time commitment from both the teacher and the students was required. There were no fixed weekly meetings but Eirini's initial plan was to use other online tools to communicate with the students on a weekly basis:

There is no chance of gathering them all together every week to do this but it's not possible for me either to do it every week... [We meet] whenever we have material, it may be three times a month or once a month, whenever we have collected the material we have decided upon and we need to co-ordinate, then we will arrange a meeting...I'll keep in touch with

the students through MSN, we have created groups in MSN and we communicate through the chat... (Eirini, interview 1)

Despite her initial aspirations this never materialised and there were only some sporadic after-school meetings throughout the year. Reflecting on why the activities were not organised on a more systematic basis, Eirini reported how the project was compromised by the time constraints and also students' lack of motivation as well as curriculum restrictions:

Well, it was difficult because I was off on sick leave several times, we missed some classes, well that's about it. And, also, the students' indifference. I said I'm not going to do all the work myself this year. There are no motives for the children, I've mentioned this before. There isn't the slightest motive for the students to work on these programmes. I can't run them within class time because the students are from different classes and even if I did it with one class only it wouldn't be right, it's not pedagogical. The 25 students that would be in the class would not agree to work on the programme. (Eirini, interview 2)

The rigidity of the curriculum and how this affects eTwinning or other extra-curricular projects was also highlighted by Eirini during the final interview:

It's really difficult to carry out a project outside the curriculum as very few students will stay [after school] and do it. Unfortunately, in order for the students to stay and become involved there has to be a motive and this motive is a trip, particularly for secondary education pupils –at least for upper high school- because they are up to their ears with homework. But because this is not funded and at least in our school the students do not come from social classes that could provide the money for such a trip it's really difficult to attract them to join the project. (Eirini, interview 3)

Conversely, the students reported that they were willing to attend weekly meetings belying Eirini's argument with regards to their indifference and lack of commitment:

Int: How do you feel about the project so far?

Nikos (16): Good, it can't be bad meeting new kids and talking about a trip!...But we just didn't have time...Miss didn't have time to do things and continue [with the project].

Int: Would you be willing to stay after school?

All: Yeah.

Aris (16): We don't have anything else to do.

Int: So you wouldn't mind staying after school?

All: No, not all.

The sense of non-commitment and of perennially postponing meetings and activities and often looking for excuses is striking in the excerpt below when Eirini mentioned in the second interview in February 2010 that she had still not allocated tasks to the students:

I haven't assigned anything to them. I will assign this task to them to do at home and they'll bring it to me eventually and we'll upload it all together. Each will prepare his part in electronic format of course and we'll see if they will be able to translate it. (Eirini, interview 3)

With regards to the Italian participation Miriam described how organising the project and meeting deadlines was time-consuming both in terms of personal and class time whilst she also argued that an early start and sticking to rules was important for the final outcome:

It took a lot of personal time, we had to implement the project into class time so this took a lot of planning in order to meet deadlines...we need to follow some rules, the project has to start at the start of the school year and follow the school timetable. (Miriam, email interview)

Last, the teachers' decision to organise a Comenius project the following year and meeting the deadline for submitting the application appeared to affect both the time and the energy they devoted on eTwinning.

Limited student motivation

As outlined in the previous case studies, student motivation and engagement constitutes one of the most critical factors that can shape the outcome of the project and determine its success. However, in this case study it is particularly challenging to assess student motivation since the project never really took off and lack of content cannot be attributed to limited student participation since the majority of the students were never even registered on the platform. On one hand, the pupils who signed up for eTwinning and took part in the focus group interviews, appeared enthusiastic and reported that they were willing to devote personal time for out-of-school participation in the activities. On the other hand, Eirini described how difficult it was to motivate students to take part and what a challenge it was engaging them in activities and making them work from home:

The students are not interested in doing work from home and they say to me this: 'Miss, if I am at school for seven hours and then go back home and have to spend another seven hours in front of the computer or even just two or three to repeat school [sic], I don't want to...either you are cutting down on my school work if you want me to get involved at home'. (Eirini, interview 1)

Conclusion

As described before, the prospect of an exchange trip and online communication with pupils abroad appealed to the Greek student participants and triggered their participation. On the other hand, for the two teachers the key drivers for engaging with eTwinning were first and foremost the perceived added value for students in terms of improving their language and ICT skills as well as becoming familiar with a foreign culture. In particular, eTwinning was seen as a pedagogical resource capable of providing alternative ways of approaching teaching and learning.

The two major and more explicit inhibitors that can be identified were technical difficulties and time pressure, however, at a deeper level of analysis one could argue that the two teachers never really committed to their decision to engage with eTwinning and kept making excuses and renouncing responsibility. Since this was not their first project but they were fairly experienced and had used other tools in the past creating projects that were successful enough to be nominated for an eTwinning award they could have easily migrated to another tool and overcome the initial technical difficulties. When questioned about this, neither Eirini nor Miriam appeared willing to provide a straight answer and focused on their plans for their future instead.

To sum up, this chapter has endeavoured to portray the rather unsuccessful eTwinning journey of a Greek secondary school and their Italian partners. A range of drivers and inhibitors emerged from the analysis of the data associated not only with technical impediments but also with the wider personal agendas of the participating students and teachers as well as the educational structures and the micropolitics of the classroom and the broader concept of the school as an institution.

Chapter 10: A comparative case studies analysis

Introduction

The past four chapters have reviewed a range of evidence from the case study projects - highlighting and illustrating the many issues underpinning schools' engagement with the eTwinning initiative and revealing how a range of overlapping and interrelated factors can determine educational collaboration. In this fifth data-based chapter, a comparative approach to data analysis is taken that allows us to compare the data collected from the four diverse cases in terms of the thesis' research questions. Given the main objective of this study to investigate the similarities and differences underpinning ICT use for school collaboration across a range of eTwinning projects, there is now a need to compare the four previously discussed cases. At the start of this thesis it was highlighted how the collaborative and other teaching and learning opportunities afforded by digital technologies and web 2.0 tools were seen to resonate with the collaborative aims and flexible nature of the eTwinning initiative. This chapter will go on to bring together, summarise and compare the findings from all four case studies – exploring how digital technologies were appropriated in practice and presenting the types of school norms and modes that did not fit comfortably with these perceived opportunities. This will be achieved by engaging in a comparative analysis and will be structured around themes rather than individual participants or projects - highlighting a number of underpinning issues that recur throughout the data whilst answering the four research questions of this study established in chapter 4:

- How can the use of digital technologies create opportunities for online student interaction and collaboration?
- How do these opportunities 'fit' into existing school practices?
- What are the drivers and inhibitors for engaging with the eTwinning project for teachers?
- What are the drivers and inhibitors for engaging with the eTwinning project for students?

RQ 1: Creating opportunities for online student interaction and collaboration

The perceived benefits reported in the empirical data resulted largely from overall participation in the eTwinning projects rather than from the sole use of particular digital technologies. Certainly, the tools that were employed contributed towards facilitating online interaction - allowing participants to overcome geographical barriers and providing an opportunity for communication in the absence of face-to-face interactions. Additionally, data analysis identified a number of perceived benefits that resulted from the overall 'eTwinning' journey as well as the engagement with particular tools and activities.

Engagement with the project and perceived benefits and opportunities

During the closing stages of the data collection when teachers and students were asked to reflect on their general experience, the majority of them perceived it as enjoyable or 'fun' and reported that they would consider taking part in eTwinning again the following year. These teachers and students who viewed their experience positively regarded eTwinning as a break from their everyday classroom routines and welcomed the opportunity to approach everyday teaching and learning activities more creatively. Some students from cases 1 and 2, for instance, highlighted how using ICTs was more motivating and enjoyable compared to their usual daily classroom and homework patterns. Additionally, some of the teachers were already in the process of planning their next project either with the same or with new partners whilst the students who were eager to engage in another project the following year explicitly noted that their motivation would increase if the next project was more interactive.

For other participants, however, 'fun' can also be interpreted as an experience that was perceived as non-threatening and did not transform but neither did it interfere with their schooling routines. Meanwhile, in all cases there was a minority of indifferent students who remained unimpressed with the project, did not see any particular benefits and were not enthusiastic with the prospect of taking part in eTwinning again. These students appeared to have been more cautious when it came to altering their schooling routines and the use of digital technologies did not prove a

particularly powerful catalyst that transformed their learning experience. On one hand, this was associated with poor ICT infrastructure where students often criticised the computers and internet connection available at school as opposed to the more advanced technologies they could access at their home environment. On the other hand, in case 2 where the students were accustomed to an ICT saturated classroom engagement with technologies was not seen to offer added motivation.

Other opportunities emerging from the use of ICTs in the cases of the Sparta and reading-club projects were related to using the official eTwinning wiki and forum respectively as an online revision repository. The benefits accrued from such ICT use can be described as unintentional ‘side benefits’ since they did not consist part of the original aims of the projects. Interestingly, some students in the Midlands school case study primarily perceived TwinSpace as an online depository for having revision material readily available. Last, some of the students in case 3 reflected on how their foreign language skills had slightly improved as a result of engaging in the project activities and overcoming their initial shyness – particularly when it came to face-to-face interactions during the exchange visits.

Issues of collaboration and co-operation

Although the eTwinning projects and the tools employed created opportunities for social interaction and online collaboration, it was apparent across the four case studies how the different classroom contexts resulted in different communicative and collaborative experiences. Even so, understanding and evaluating instances of collaboration largely depended on defining how collaboration was interpreted by the project participants. In particular, for a large number of students collaboration, both online and offline, was rather poorly understood and was perceived as the last stage of independent research. For instance, after conducting research independently, they saw collaboration as the process of sharing and integrating things online. Additionally, one could argue that the collaborative nature of the projects and the initial ambitions of the teachers were somewhat compromised by the day-to-day practicalities they faced in the classroom, such as time constraints and curriculum pressures. Additionally, a number of students reported that they were somewhat uncomfortable with the idea of editing the work of others. As such, there was little evidence of collaboration in the strong sense of socially constructed content across

schools and teams or pairs of students and the accounts of how the students in both projects engaged with the wiki demonstrated that cooperative practices prevailed instead.

To some extent real-time online communication with the partner teams was arranged in the Midlands and London suburban cases when the teachers organised to use the TwinSpace chat and Skype respectively but technical impediments and time issues did not allow these efforts to materialize. At another level, asynchronous communication did take place to some degree on the forums and blogs in three out of the four case studies but remained sporadic and rather mundane. In the two case studies which adopted the use of wiki tools no collaborative writing occurred and there were few instances of editing the other participants' work (see chapters 6 and 7). On the one hand, in case 2 the wiki was used as a platform for learners to get acquainted with their partners and the entries were focused on presenting themselves, their hobbies, favourite movies and so on. On the other hand, the wiki topic in case study 1 was Ancient Sparta and student practices were at large restricted to either adding authentic content to the wiki or copying and pasting in bulk from online websites such as Wikipedia. After some initial introductory messages posted randomly on the forum and the blog, the students mainly worked on their assigned thematic categories - the knowledge content produced was limited to wiki entries published individually or in pairs, rather than shared group-work between and across the two schools. Hence, when interviewed after the completion of the projects, the majority of students reported having only a superficial idea of who their partners in the other country had been.

In case study 3, after the first year of posting on the forum and having short-threaded discussions, the students met face-to-face when the Danish group visited Athens. Still, this did not result in increased engagement and further online collaboration but rather the opposite - the Danish students used TwinSpace during the second year of the project even more sporadically than before. This was partially justified because some of the participating students either graduated or dropped out of the project and were, to some degree, replaced by new students. Still, meeting in person marked a transition towards using other less institutionalised ICT tools to serve the students' communication needs - resulting in a core of students from both teams exchanging Facebook and/or MSN details and continuing to chat on a more informal basis there.

In a similar manner, the use of Facebook was suggested by a Greek student on the TwinSpace forum of the Sparta project as a more appropriate means of online communication. Nonetheless, only one student from the UK school responded and befriended her on Facebook and, thus, the use of Facebook did not cascade to the rest of the team. The teachers from both case studies were aware of their students' 'migration' to other tools and did not object, however, they did not opt to formally adopt such tools for the projects. In the case of the Sparta project social networking sites were blocked on the school's computers whilst the teacher also highlighted what she saw as legal 'grey area' associated with linking with her students on Facebook because of child protection issues.

The need for partner reciprocity

Another emerging theme linked to (lack of) collaboration was associated with the partners' uneven engagement with the project since in all case studies one of the two partner teams was more committed than the other. Close analysis of the data highlighted that some of the teams uploaded more posts and made more contributions and comments whilst at the same time they were waiting for some kind of response by the other group – which at times never came or came too late, resulting in frustration and disappointment. For instance, in case study 3, students often felt discouraged and deterred from posting online what they had discussed in their reading club meetings. Since their partners were not reading or not commenting on their posts it seemed like they were merely talking to themselves. As Sofia described 'the children say "they [the Danes] don't upload anything, why should we and who are we talking to?" Since we are not talking to anyone we can read it amongst ourselves' (Sofia, Athens suburban school teacher).

In the case of the Sparta project it was the English students who were considered to be more committed compared to their Greek partners. Not only were some of their wiki contributions more extensive and substantial but a couple of students also attempted to initiate an informal discussion on the Pupil's Corner forum which declined fairly quickly due to limited participation. In the focus-group interviews the English students often complained about lack of reciprocity and mutual effort from their partners that inevitably led to loss of interest and limited engagement from their side. Similarly, when looking at case study 2 the English students had a greater

online wiki presence compared to their German partners even though both groups failed to use the wiki tool collaboratively. First, they were each allocated an individual wiki page where they posted information about themselves whereas their partners did not create separate wiki entries due to technical problems and limited computer access. Second, when the German team initiated a forum discussion on the topic of films and the UK students posted back responses, the German students did not reply back so the conversation did not flourish (see chapter 7).

Lack of partner reciprocity resulted in turn to a lack of audience that would give project activities more meaning and relevance for the students and that would perhaps encourage more online systematic engagement. In this sense, since the projects had no public audience other than the eTwinned teams, authentic tasks and activities greatly depended on partner reciprocity. As this implies, if the students were to use the online publishing tools meaningfully to express their 'voice', then addressing an audience who listened and responded was crucial for the successful outcome of the projects.

Language issues

The nature of partner reciprocity was also associated with language issues and the difficulties in maintaining proper and quality forms of interaction were highly dependent on the foreign language skills of the participants. On one hand, key to some teachers' initial decision to get involved in eTwinning was their desire to create a connecting link with a partner school and enhance the pupils' foreign language skills. On the other hand, contributing posts in a foreign language was in some cases a cause for student discontent that resulted in limited participation. In case 1, for example, communication in a foreign language was a barrier for some of the Greek students and prevented them from contributing to the wiki and participating in the online discussions.

Most of the A grade students have an adequate level but certainly...there is this, let's say, psychological issue...when you communicate with a British person you are more stressed out about how you can manage it and also when the topic is so specialised, such as Ancient history they don't really know the relevant vocabulary and we had to work on that (Dimitra, Northern Greece teacher).

The issue of the language barrier was also acknowledged by the UK students who despite their good will to appreciate the Greek effort expressed some degree of

discontent with the poor quality of the written exchanges that did not meet their initial expectations:

The whole language barrier didn't help much either because I expect, if I had to speak Greek I'd be like 'I won't bother' so I suppose it's testament to them that at least they tried and they put on like 'hey, I'm Chris, I like basketball' or something but it's just a bit dull to read six people say 'hi, I'm home with my friend' or 'Hello, I'm...' (Mike, 16, Midlands)

Similarly, in cases 2 and 3 some of the students described how by using a foreign language for their online interactions part of the meaning-making process was inevitably lost in translation:

We only speak with them in English, just in English. Some of us who don't speak any English they have no contact whatsoever. There were some texts we did and everything was translated into English, perhaps some of them suffered from the translation from Greek to English... And perhaps some of meanings and the concepts of the texts were lost...which we consider as very important but they just thought it was just a text they read. (Maria, 16, Athens suburban)

As such, the successful outcomes of these projects did not only depend on their motivation and willingness to engage in online activities but also on their level of linguistic skills and knowledge that were necessary for taking part in the collaborative task. In a sense, even in the cases where the students used, on their own accord, other social networking tools such as Facebook, there was a clear difference between the types of literacy required for informal online interaction and those required for other formal types of learning activities such as creating wiki posts.

RQ 2: How do these opportunities 'fit' into existing school practices?

The 'goodness of fit' between eTwinning and the institutional structures of the schools

At first glance, the flexible nature of eTwinning appeared to allow for easy fit with the institutional structure of schools. There were few increased expectations or imposed timeframes, no administrative control or compliance with external demands and no pressure applied to teachers to produce tangible outcomes. Participation in eTwinning was seen as the organic and spontaneous initiative of the teachers who had become voluntarily involved and had the opportunity to adapt their project to their students' and their own needs. This flexibility was largely reflected in the varied nature and focus of the different project activities. However, despite the lack

of any external authoritarian mode, teachers' efforts appeared to be somewhat compromised by other institutional and organisational pressures, with time, curriculum, assessment and space being reported as some of the major inhibiting influences.

One of the most significant issues raised in the interviews centred on the importance of individual and institutional time. These descriptions ranged from the teachers' difficulty of finding time within the curriculum to dedicate to the project to engaging the students to devote their personal time for after-school meetings or project assignments. In the case of the two UK projects, teachers took up 'class time' and implemented eTwinning in the framework of their taught subject, however, both teachers reported how the allocated 'class time' was still limited. Meanwhile, in the case of the two Greek projects which were not implemented in a taught subject but required the after-school voluntarily participation of students from different classes, time was also reported to be a major impediment by both teachers, particularly since a large number of the participating students were preparing for the state exams. Sofia (Athens suburban), for instance, acknowledged how if a 'library period' was allocated within the curriculum, they could take advantage of that time and use it for the projects' activities. Similarly, Eirini (Athens inner-city) reported that engaging students in such projects that took place after school hours outside the school curriculum was rather challenging and highlighted the differences across educational sectors and the need for an allocated time slot within the curriculum so as to run collaborative projects smoothly. Time impediments were also associated with the different holiday and exam schedules across schools as well as the time zone differences between countries. Additionally, the different time-slots allocated for eTwinning activities within the timetable of the partner schools did not make real-time communication possible. Moreover, curriculum time pressures combined with summative assessment and the general constraints on the teachers' time did not allow them to dedicate as much time on the project or employ more innovative approaches as they had originally anticipated.

Within educational contexts another dimension that needs to be taken into consideration in the design of web-based activities is that of space. For example, during the observation visits, it became apparent how having an appropriate space such as a computer lab was important but not critical for the success of the project.

In the case of the reading-club the library where the project meetings took place was a welcoming space buzzing with students but, with just two computers crammed in the corner of the room, it was far from ideal for hosting a web-based collaborative project. Likewise, the library of the Athens inner-city school was an inadequate and ill-equipped space that could actually discourage the students from using the computers. Conversely, in the case of the more ‘high-tech’ London suburban school, although the classroom was equipped with computers and the students did not have to relocate to a computer lab, access to technology did not seem to consist an additional driver for success. In reality, although the students had individual access to a computer they often preferred to engage with a more ‘analogue’ activity such as reading a book or playing a board game.

Besides these issues of ‘fit’ with the temporal and spatial structures of school, some additional, unplanned hurdles such as student sit-ins and the swine flu epidemic in the Greek schools resulted in unintended dips and lapses. Moreover, lack of assessment was seen in all cases as a de-motivating factor rather than an opportunity to experiment with more creative and unconventional activities. Since contributing to the eTwinning activities did not consist part of formative or summative assessment the teachers often found motivating their students to engage with the project to be particularly challenging especially during exam periods. In this sense although online environments presented collaborative opportunities, the enduring nature of school organisation appeared to influence the outcome of all four projects across schools and countries to a far greater extent than initially anticipated.

The role of the overarching eTwinning organisation

The eTwinning organisation was seen to serve a range of roles and teachers expressed mixed feelings with regards to how satisfied they were with the assistance and guidance they received from the National and Central Support Services. On one hand, the eTwinning umbrella can be seen as providing an external catalyst for action – inspiring individual teachers to get involved and enabling them to find like-minded colleagues across Europe in order to set up their collaborative projects. Despite the lack of external funding for face-to-face student exchanges, the fact that eTwinning was formally recognized by national Ministries of Education and local authorities added value and kudos to the project activities both in the eyes of the

teachers as well as in the eyes of the school senior managers. As such, the websites of all four schools hosted online information about their eTwinning projects that were often listed under the school's 'enrichment activities' umbrella.

Additionally, the official eTwinning platform provided teachers with a useful partner-finding tool making their search easier and less time consuming. All teachers reported that they used the eTwinning partner-finding forum and considered the process of looking for partners fairly straightforward. In particular, as discussed in Chapter 7, Isabel, one of the leading teachers, described eTwinning as the 'educators' meat market' equating it with Facebook in terms of individuals seeking partners and forming links. However, more experienced teachers such as Isabel were also more likely to approach eTwinning as a 'stepping stone' and migrate to other external tools.

Once the different projects had been initiated and the first hurdles emerged, mixed reactions were reported by the teachers with regards to the quality and level of assistance provided by the National and Central Support services. In particular the teachers who opted to set up their project using TwinSpace rather than other external tools encountered difficulties in terms of registering their students and accessing the platform. As described in the previous empirical chapters, the teachers' requests for technical help to the National Support Services were unfruitful - the replies they received either arrived too late or did not solve the problem. This resulted in losing valuable time and increased teacher frustration.

Varied feelings were also reported with regards to the nature and quality of the teacher training and other eTwinning-related activities and great disparities appeared to exist between the British and Greek participation. For example, both English lead teachers were invited to national and European eTwinning conferences respectively where they had the opportunity not only to meet other teachers but also to attend a range of workshops and in the case of Lucy be awarded with a quality level. Conversely, the Greek participants were never offered similar opportunities and Eirini considered receiving a quality award label for her previous eTwinning project somehow meaningless since it had not opened any other doors such as receiving funding for face-to-face meetings or participation in eTwinning events.

Furthermore, the school year 2009-2010 signalled the transition from the old and relatively rudimentary TwinSpace to a new, more web 2.0 orientated platform that amongst other features allowed the configuration of wikis and blogs. However, this transition resulted in leaving some teachers struggling to cope with using the more complicated tools on top of overcoming the registration and access problems. Although some training seminars were organised in Athens during the winter months of 2009 Eirini (Athens inner-city) commented on the inconsistent content and mixed level of participants as well as the distance barriers associated with the location of the past training events. Time and space difficulties associated with taking part in these teacher training events were also highlighted by Lucy (Midlands teacher) who opted for the online 'Learning Events' instead – short, intense courses that took place on the eTwinning platform and involved participants across Europe.

RQ 3: What are the drivers and inhibitors for engaging with eTwinning for teachers?

Drivers for participation

A first glance at the data of this study revealed that the teachers' perceptions of eTwinning, digital technologies as well as their understandings of teaching and learning were varied. All teachers were committed to their work and their subject and although their level of experience ranged they were all appreciated by their school's senior management and were considered an asset to their institution. At the same time, their interest to explore and implement eTwinning in their schooling routines was shaped by a range of drivers. In particular, all the teachers responsible for initiating and configuring these eTwinning projects were on the whole enthusiastic and committed practitioners from a variety of educational backgrounds. Although their teaching experience and ICT skills ranged, they were all equally passionate about the potential of online collaborative practices when they instigated their students to take part in eTwinning.

At the same time all teachers were willing to devote personal time in order to set up and monitor the project. Two of the teachers (Sofia, Athens suburban and Lucy, Midlands) had been taking part in professional development courses at University whilst the other two were experienced eTwinners and had set up a range of other

eTwinning projects in the past. The two, younger in age, UK teachers were seen by their head teachers as particularly adept with incorporating new technologies in their teaching practices and appeared confident users of ICTs. Additionally, both these UK teachers had previous teaching experience at schools abroad and they were keen to expand their students' horizons and expose them to a different culture. Similarly, although the two Greek teachers were less familiar with the use of web 2.0 tools and their school's ICT infrastructure was not as advanced as that in the UK schools they were equally active and committed practitioners constantly pursuing opportunities for professional development and looking to provide their students impetus for extra-curricular activities. The eTwinning initiative appeared to provide them with an external 'catalyst' - offering them the opportunity to experiment with something outside the norm of the school practices and explore the use of other tools and activities. Sofia (Athens suburban), for example, described how her personal inquisitiveness to explore new things was an additional driver for participation in eTwinning.

As such the personal enthusiasm and commitment of those dynamic teachers triggered and shaped their participation in eTwinning. However, their experience consisted a 'lone journey' rather than a collectively shared experience within their school. Although all head teachers appeared to be supportive and in some cases enthused with the teachers' initiative their input to the project was minimal. Support took different forms and the most notable examples were funding some of the expenses for the exchange visits in the case of the Greek-Danish twinning project and allowing Isabel (London) to take time off to attend an eTwinning conference. Last, despite presenting their collaborative activities to in-school department meetings, none of the teachers attracted the interest of their colleagues with the exception of Miriam who collaborated with another teacher within her school. Conversely, lack of support from her schools' ICT team was reported in the case of Marlene and was attributed to lack of time and work overload on their part. As a result, in all four case studies eTwinning activities were to some extent 'hero-led' by motivated individuals as opposed to being 'group-led' by a team of enthusiastic teachers from each school.

Positive outcomes for teachers were at large associated with their professional and personal development. Not only did they view their participation in eTwinning as an

opportunity to explore different teaching paths but also they felt it reflected positively on their professional status. Some of the benefits included creating links with colleagues across Europe who shared the same values and visions, developing their ICT skills, and enhancing their confidence with relation to implementing new technologies in their classroom. Although there were no monetary benefits, the teachers felt more valued and their sense of self-worth within their school increased. Less experienced teachers such as Sofia (Athens suburban school) described how her ICT skills had improved, whilst more experienced teachers viewed eTwinning as a prospect to do something more creative that could lead to future professional opportunities. Last, another key aim for teachers was to open up their classroom boundaries and present students with an external audience and, in particular, for the foreign language learners provide them with an opportunity to interact with peers within authentic situations.

Technical issues

The issue of adequate resources did not appear problematic and for the particular projects the ratio of pupils to computers was satisfactory with 1 or 2 pupils per computers in most cases apart from the Athenian reading club project. Still, this did not result in effective use of ICTs and throughout the four diverse case studies various technical constraints were identified by both teachers and learners. Depending on the participants' confidence level and breadth of ICT skills but also on the particular tools used for different projects a range of issues recurred. In particular, TwinSpace was used to host three of the projects and the teachers reported difficulties when registering the students on the platform. As a result the teachers lost valuable time registering, de-registering and re-registering the students in an attempt to overcome the technical difficulties. Still, some students reported that they had been unable to access all sections of TwinSpace during the project (see Chapter 6). Another significant issue highlighted by Sofia (Athens suburban) was that some students were prone to losing their log-in details or forgetting the URL of the website - resulting in the teacher investing even more time to sort out such procedural practicalities. Other technical issues were associated with TwinSpace opening up in a pop-up window and thus often being blocked because of particular computer settings.

Trivial as all these technical issues may seem in isolation, they often led to teacher frustration and blighted their experience. In particular, when these technical difficulties were combined with other organisational and time pressures they resulted in limited student engagement or even failure to materialise the project. For instance, despite the initial enthusiasm about the potential of using a wiki, a certain degree of technical skills and confidence in using the wiki technology was also vital successful configuration of the tool. However, both Eirini (Athens inner-city) and Dimitra (Northern Greece) described how their lack of familiarity with the wiki tool compromised the project outcome. In the case of Dimitra (Northern Greece) this translated in failure to explore the wiki's potential or guide her students effectively so the wiki was mainly used as an online content publishing tool. Similarly, Eirini (Athens inner-city) described her experience configuring the TwinSpace wiki perplexing and frustrating and the project did not materialise.

In case studies 1 and 3 when the teachers appeared successful in overcoming these technical challenges, a large number of students were disheartened with the process as they were used to more straightforward and user-friendly online tools and applications. Additionally, the majority of students did not report finding TwinSpace particularly appealing aesthetically whilst they also highlighted a range of shortcomings. One significant issue raised in the interviews was the lack of notifications and the difficulty to search for topics and authors both in the old and the new TwinSpace. For instance, it was not possible to link registered users with the messages and comments they had posted. In the reading club project, where the old TwinSpace was used, both teacher and student participants reported having to go through each thread and forum category to check if a reply or comment had been posted whilst in the new TwinSpace there was a window indicating 'recent activity'. These technical difficulties and the ways they were resolved are presented in this section because not only did they inhibit the eTwinning journey of all the teacher participants but they also mirror their different outlooks on schooling and highlight the importance of the teacher role in orchestrating the collaborative project and configuring the different technologies that were employed.

RQ 4: What are the drivers and inhibitors for engaging with eTwinning for students?

Across the four case studies different approaches towards eTwinning and various types of student engagement were apparent. Interestingly, these attitudes shared similarities and differences across all projects rather than across types of schools or countries. In the case of the Athens inner-city school, there was very little student engagement with the project and no use of TwinSpace since the majority were not even registered on the platform whereas in the other cases students engaged more readily in the projects' activities. The major drivers for participation reported by students in the focus-group interviews were associated with communicating and interacting with students of a foreign school and possibly taking part in an exchange visit. Thus, students often appeared to view participation in eTwinning as an opportunity for informal interaction with peers rather than a means of collaborative learning. There was also little evidence to suggest that their motivation was technologically driven since only a smaller minority of students reported that the computer-based nature of the activities affected positively their engagement.

The realities of student participation

Student participation was characterized by a split in the levels of engagement with some students resisting more whilst others were more eager to take part in online activities. Thus, for the purpose of this study, students may be grouped in four broad types depending on their level and depth of engagement with the tools and the activities with most prominent of user categories amongst the participants being the 'leaders', the 'explorers', the 'users' and the 'lurkers'. The main characteristics of these different types of team members are discussed below whilst it should be noted that these categories are not mutually exclusive, for example 'leaders' can also be seen as 'explorers'. Additionally, since the Athens inner-city project never fully materialised and the students did not contribute to the wiki or TwinSpace they are excluded from this categorization.

Student leaders

The term 'leader' is intended to signify a higher level of student engagement with the projects' activities and appropriation of online technologies. In a sense, student leaders, like their teachers, emerged as engaged and dynamic champions although

they consisted the smallest group in the student sample. Typically these students not only contributed more compared to the other participants but they also appeared more engaged, they took initiatives and attempted to lead their team. In case study 1, Megan, (16) emerged as the most active of her group – she deleted blog posts and replaced them with wiki entries, encouraged her team to post more, gave them advice on how to use the wiki and acknowledged the authors of the deleted blog posts (see Chapter 6). She was also the one who responded to the Greek student's message on the forum and befriended her on Facebook. Similarly, other leaders may not have been as active and dynamic as Megan but were distinct from the rest of the group in terms of their commitment and unremitting contribution to the projects' activities. In case study 3, an engaged core of about five students (predominantly girls) contributed to the forum by posting messages, comments and pictures. These were the same girls who had also edited their profile on TwinSpace by adding a picture, descriptions of themselves and other contact details.

Student explorers

The student explorers consisted yet again a small minority of students who demonstrated a more creative and exploratory use of the ICT tools and contributed in more resourceful ways. These students, although they did not show any leadership skills, they were more open towards experimenting with the tools and their learning practices. For example, in the case of the reading-club project this involved embedding YouTube videos in the 'Music' forum category as opposed to copying and pasting the link which was common practice for other students. In the case of the Sparta project the student explorers could be said to have displayed greater engagement with different tools and experimented to a small extent with the editing properties of the wiki. These were, however, restricted to minor editing of spelling mistakes or re-arranging pictures with the exception of one student who disagreed with copying and pasting practices in her team and edited the whole entry. Other examples of a relatively more creative use of the technologies included uploading pictures or videos and formatting the text-based entries or experimenting with adding a caption to a photograph.

Student users

The largest proportion of the students can be described as ‘users’ – they employed the tools and contributed to the wikis and forums albeit rather unresourcefully. Their engagement was shaped at large by their past ICT experiences and they did not appear willing to take risks and try things out, neither did they engage in more proactive tasks such as initiating discussions. Instead, they followed the teachers’ instructions, asked for guidance when they faced difficulties and posted entries which predominantly resembled plain-text word documents – sticking to tried and tested practices they were familiar with. This was particularly notable in the two wiki-based projects which were not successful in using the tools for collaborative writing. Additionally, in the case of the Sparta project a large number of ‘student users’ resorted to pasting content directly from the source rather than engaging with the topic and they did not perceive the wiki as supportive of their learning practices but as separate from their main body of work and difficult to access – stating in the interviews that if they could get away with it for the school assignments they saw no point in trying harder for the unassessed project.

Apart from lack of student motivation and/or interest to put more time and effort in the project activities, there were also some other reasons underpinning the uninventive use of the online tools. For example, there were original entries in the Sparta project albeit rather limited and uncreative. Similarly, in the case of the German wiki no instances of copying and pasting were reported – still the majority of entries resembled a word document lacking in photographs or any other type of content apart from text. Conversely, the students employed more creative practices in the word documents including pictures, table and experimenting with fonts. This, to a large extent, was the result of lack of training and guidance by the teachers who presented students with the tools but did not explain their various potential such as editing each others’ entries, posting pictures, videos and links and so on but took for granted that their students were familiar with using them. However, during the focus group interviews only one student reported having used a wiki before while all the other students were unfamiliar with the wiki-based format.

Student lurkers

This group consisted of a significant number of students who preferred to make no or very limited use of the online tools and resisted participation in any of the activities. For example, in case 3, out of the 106 registered students (Greek and Danes) 21 never accessed the reading-club TwinSpace whilst 22 only logged in once. Similarly, in case 1, 24 students out of the 64 registered never logged in on TwinSpace in the case of the Sparta project. Out of these 24 the majority (n=18) were from the Greek partner school. Because of the technical difficulties that had been encountered, these numbers cannot be taken at face value since a couple of UK students reported that they used their partners' log-in details as their account did not work.

As such, it appeared that a significant proportion of students were resisting the use of the technologies and displayed indifference whilst others expressed discomfort or discontent either because they thought they were not adequately skilled to use the tools or they lacked interest in the project whatsoever. There were varied attitudes underpinning user disengagement with the project and the online activities, however, this was at large linked to lack of motivation and interest. The students felt no need to participate since the projects did not constitute part of their formative or summative assessment and it was particularly challenging for the teachers to enhance engagement and stimulate motivation especially if the students had to dedicate time outside school. Interestingly, in the student focus group interviews very few students openly admitted that they had never contributed to the projects – quoting indifference, technical difficulties, forgetting their password, lack of time and assessment as the main reasons for their disengagement. Additionally, lack of reciprocity by the respective partners affected student motivation and involvement.

Still, apart from the other factors underpinning student disengagement both Lucy (Midlands case) and Sofia (Athens suburban case) highlighted the importance of the group's size. In retrospect, they both found that having a relatively large group of student participants did not necessarily lead to better and more productive outcomes. For example, in the case of Sofia (Athens suburban) this resulted in more workload in terms of registering them on the platform and also coordinating and guiding them. Even if the students had all volunteered for the reading club, she found it was a

mistake taking them all on board for the eTwinning project and contented that having a core of about fifteen more committed students would have been more productive and less stressful for her in terms of arranging the practicalities and monitoring their contribution. Last, both teachers reported that the particular core of more engaged pupils were more motivated and hardworking as well as more independent learners in their general learning practices.

The empirical evidence highlighted a range of problems with regards to the 'digital native' narrative, particularly when looking for differences between generations - in our case the teacher and student participants. The notion of a 'digital gap' appeared highly problematic, as there was no sharp generational break between teacher and student use of the project tools and platforms. For example, although Isabel (London) and Lucy (Midlands) were the youngest and most adept at configuring and using social software tools of the participants, other teachers such as Sofia (Athens suburban) and Dimitra (Northern Greece) were able to overcome the initial technical difficulties. In particular, a large number of students from the three completed projects reported in the focus group interviews how they resorted to their teachers' technical help.

Another seemingly important issue was the mismatch that existed between teachers' expectations and students' actual collaborative practices and ICT skills. For instance, both Lucy (Midlands) and Isabel (London) overestimated the 'digital native' abilities of their students. In a sense the teachers' desire to step back and allow the students to work independently and take responsibility for their work did not translate well in the more institutional classroom environment. Additionally, it seemed that the teachers did not provide adequate guidance and/or ideas to encourage pupils to use the tools more creatively. For instance, during the observations both teachers often asked the students to 'log on the wiki and update/work on their section' without offering any other detailed instructions - taking for granted that after the initial introductory session the students would be able to use the wiki efficiently and engage in collaborative practices. As a result of this unfamiliar freedom and flexibility, some of the students in the case 2 project seemed rather lost and looked at what the person sitting next to them was doing or simply pretended they were working on their wiki page but were browsing irrelevant websites. Last, although the majority of students reported in the interviews that

using the wiki was quite straightforward and after some 'trial and error' they faced little difficulties, still their engagement and contribution were curtailed by constraints such as their unfamiliarity with the editing and collaborative properties of the wiki tool.

Bringing old work practices into 'new' contexts

Despite the initial enthusiasm of the teachers with regards to implementing new technologies such as wiki tools to facilitate communication and collaboration between their geographically dispersed teams all four case studies showed that, although implementing technology into contemporary classrooms was associated with some positive outcomes, it did not result in instantaneous and ground-breaking changes. Bridging the gap between traditional educational practices and the more radical nature of ICTs and web 2.0 tools, at large, resulted in the integration of the new into the pre-existing rather than the other way round. As such, instead of using online technologies to experiment with new forms of collaborative writing and communication, students' actual engagement remained unadventurous and rather conservative.

The use of digital technologies for the majority of students at large involved frequent engagement with social software tools such as Facebook and MSN at home and sometimes even at school during their breaks and free periods (see chapter 8). Other popular types of in- and out-of-school ICT use included using Microsoft Office applications and listening and/or downloading music and playing games. In a sense students appeared to appreciate ICTs as a means of more easily supporting their studies in terms of looking for information (and frequently copying and pasting it) as well as contacting their classmates for school-related enquiries. Thus, although it can be argued that ICTs were certainly a part of everyday life for students, their specific types of engagement were rather unspectacular. Additionally, it should be noted that in-school use of ICTs was dominated by the 'copying and pasting' of material retrieved from online resources into text documents, PowerPoint presentations as well as wiki entries and forum posts in the case of the eTwining projects. When students were questioned about these practices they reported that this was not restricted to the projects' activities but was also common practice for school

assignments. Thus, even when using new tools such as wikis for collaborative writing the students adopted a more conservative approach and they implemented their old practices into a new context rather than exploring and building on the potential of the new technologies.

Replicating classroom practices in the context of the eTwinning project was prevalent also with regards to collaborative uses of the online tools and platforms with individual posting of content rather than collaborative writing the dominant mode of engagement. Additionally, as highlighted in previous sections, all projects revealed an overall lack of idea development and commenting from the side of the authors. Even in the cases where initiating the project was marked by a stage of hype and enthusiasm and students posted more frequent and substantial contributions, soon this was replaced by indifference and a 'why bother' attitude. Although students were not fully aware of the collaborative opportunities entailed by wiki tools and did not experiment in that aspect, when presented with the idea of editing entries, the majority did not appear confident or willing to try out such new practices, whilst others appeared to be more in favour of individual ownership as opposed to collective ownership.

However, it was not just students who brought old practices into 'new' contexts but also teachers appeared to approach the technologies rather uncreatively. For instance, in the case of the German project rather than creating wiki entries on the topics of 'films' and 'Berlin info' the teachers asked students to create Microsoft Office word documents, which they then uploaded on the relevant wiki pages so that the students of the partner school could then download them (see chapter 7). This was followed by a short discussion of students' favourite films on the forum through thirty different messages addressed to an individual UK student and focused on a particular film (see figure 7.8). On one hand the configuration problems the German teacher faced did not allow her students to log in and post their own entries on the wiki so uploading the word documents was an easy solution. On the other hand despite the technical difficulties the German teacher's rather mundane as well as unpractical use of the forum indicated her lack of familiarity with online communicative and collaborative practices.

The tendency to migrate to familiar tools and online spaces

Findings from case studies 1 and 3 highlight how some of the students took the initiative to use more familiar online tools other than the ones their project was based on. Interestingly, in both cases the majority of those students came from the groups of ‘leaders’ and ‘explorers’. In this sense it was the most committed and hard-working students who had already experimented with the eTwinning platform that decided that the features and the interface of the TwinSpace tools were ‘unfit’ for their aims and migrated to Facebook and MSN. In the case study 1 project, the suggestion to use Facebook occurred on the ‘official’ forum (see chapter 6) whilst in the case of the Greek-Danish partnership this was triggered mainly because of the exchange trip and face-to-face meetings.

In the focus group interviews, students reported that it was not lack of privacy and the feeling that any communication on the eTwinning platform could be monitored by their teachers that instigated them to migrate to other online spaces. It was rather the ease of using tools they were familiar with and which were part of the daily ‘online routine’ and allowed for real-time communication - as opposed to using the forum which did not really appeal to them and was foreign to their everyday practices. Additionally, in the case of the reading-club project it was the only means of keeping in touch with their partners since the Danes made minimal use of TwinSpace particularly during the second year. Last, it is also worth noting that migrating to Facebook did not affect those students engagement with the project but the students who were committed from the start remained so throughout the school year.

The practice of migrating to more familiar online spaces also seems to tie in to the idea of overestimating students as digital natives. As highlighted in more detail in all four case study chapters, student use of web 2.0 tools predominantly evolved around the use of social networking sites for communicating with family or friends. The use of other tools such as wikis or blogs was restricted to reading - and often directly copying and pasting – content from online resources rather than contributing. Students were not familiar with online collaborative writing practices so in the absence of guidance or other models to draw on, it seems plausible that they decided

to informally import the tools they were most accustomed with, i.e. Facebook and MSN.

Conclusion

In conclusion, this chapter has demonstrated how the comparative case study approach enabled investigation of the issues underpinning the effective implementation of ICT tools for school collaborative projects within the framework of the eTwinning initiative. The study of the motivators, the inhibitors and any other factors associated with using digital technologies for online school collaboration involved the investigation of a range of issues associated with the social context of educational technology use. The use of theoretical models provided powerful tools for the planning and execution of the research. They were used to frame the design and scope of the research and they also established a basis for comparison. Comparative thematic analysis provided a systematic and authoritative approach to the identification of differences and similarities between and across these four eTwinning projects.

Given the increasing impact of implementing web 2.0 tools in educational contexts, it is essential that the other non-technical factors highlighted in this chapter should be taken into account when determining what underpins a successful collaborative project. The deep understanding of the often complex and rigid school norms derived from comparative case study approaches as embodied in this research study can assist in identifying key drivers and inhibitors and can also inform the study of resemblances and differences between dissimilar countries as well as school sectors and types. As such the next - and final - chapter of this thesis will go on to contextualise the findings of the present study in relation to the theoretical background as well as in the light of the empirical findings presented in similar studies contained in the literature review.

Chapter 11: Conclusion

Introduction

As the last five empirical chapters have highlighted, the path towards implementing web 2.0 technologies into successful school collaboration is a complex one. Looking beyond the enthusiasm and scepticism that surround the educational potential of web 2.0, a range of issues can be identified that are associated with the use of digital technologies for school collaboration. On one hand, it emerged that the particular contexts and conditions within which the different case study projects were enacted largely shaped the use of the technologies and the modes of collaboration. While the availability of a range of digital tools created similar potential opportunities for the participants, the actual engagement of students and teachers with the technologies and the final projects shared some similarities but also had many differences – justifying the theoretical concerns of social shaping approach adopted in this thesis.

Against this background, this final chapter aims to identify and explain the main findings of this study by relating and comparing these understandings to the growing body of empirical work in this area as well as the theoretical underpinnings of educational use of digital technologies described in the opening chapters of this thesis – not least the importance of social context(s) and the social shaping of technology. Finally, the chapter considers the particular limitations of this research and concludes with some suggestions for practitioners, policymakers and educators in the area of web-based school collaboration.

Linkages and disconnections with empirical findings in the existing literature

It is first worth considering the various linkages and disconnections of the present study's findings with the previous literature as discussed in the first chapters of the thesis - from the wider picture of ICT use in education to more specific examples of engagement with particular tools and collaborative practices. As previously discussed, the notion that digital technologies can transform schooling and, in particular the assumption that web 2.0 applications bear promises of increased

connectivity and collaborative learning within and across the school classrooms has been a popular one within academic discussions (Greenhow *et al.*, 2009; McLoughlin and Lee, 2007). In practice, however, the empirical findings of the present study painted a contradictory picture, offering very little evidence that any kind of reinvention and/or transformation of educational processes was taking place in any of the four case studies. Instead the present study could be said to highlight linkages and disconnections with past studies.

For example, previous research has established that young people are generally high users of the internet and digital technologies (see Ofcom, 2011; Dutton *et al.*, 2009) and this was certainly confirmed by the majority of the participants in our study. When looking for particular patterns, students' in-school and out-of-school engagement with digital technologies and the internet mirrored the findings of previous large-scale studies that identified chatting and communicating, listening to music and game playing as well as looking for information and doing homework as popular activities for younger children (Selwyn *et al.*, 2010) and adolescents (Luckin *et al.*, 2008; Eynon and Malmberg, 2011). Although differences were reported with regards to the various types and levels of online engagement, the majority of users were involved in passive consumption rather than active production of content. As the four case study chapters suggested, although digital technologies were present in both the in-school and out-of-school lives of the students in the present study and while the majority were confident ICT users, there was little evidence to suggest that they were involved in intense learning 'geeking out' activities (Ito *et al.*, 2008) or that they conformed to the profile of the 'digital natives' or 'iKids' (Prensky, 2008). Instead, as described in the previous chapter, the students who took part in this study can be more accurately grouped in four broad types of users depending on their level and depth of engagement with the tools and the activities: i.e. 'leaders', 'explorers', 'users' and 'lurkers'. These distinctions bear similarities with the profiles of internet users described in recent studies of adult ICT users, i.e. the 'peripherals', the 'normatives', the 'all-rounders' and the 'active participators' from a survey of over a 1000 young people in the UK (Eynon and Malmberg, 2011) or the categorisation of over 2000 Australian college students as 'power' users, 'ordinary' users, 'irregular' users and 'basic' users (Kennedy *et al.*, 2010).

With regards to the tools and applications, various digital technologies were employed to host the four different case-study projects and facilitate online communication and collaboration. As already described, there were instances of what could be termed content creation and interaction between the students across the different schools in three out of four case studies. However, these 'creative' activities consisted of students posting new content and to a lesser extent commenting on the work of others. Additionally, there were instances of informal online interaction between a minority of students through 'personal' spaces (rather than official school spaces) such as Facebook and MSN. All these different types of engagement and interaction could be said to have enabled students to develop some understanding and cultural awareness with regards to their distanced partners supporting the claims of others (Valentine and Holloway, 2001; Barbosa *et al.* 2004; Coutinho and Rocha, 2007). Yet, although these examples of engagement with the digital technologies met to some extent the overarching aims of the eTwinning programme, they did not appear to lead to any further instances of online collaboration between the students. Alluding to Roschelle and Teasley's (1995, p.70) definition of collaboration as opposed to cooperation it can be argued, that the accounts and observations of student engagement with the projects and the tools in all cases suggested that cooperative practices prevailed at the expense of genuine collaboration. In this sense, the experience of collaborating for students took the form of 'loosely-knit' networks of 'peers working independently rather than supporting a shared construction' (Crook, 2012, p.71).

Also, striking was students' apparent unfamiliarity with collaborative practices within their school contexts - not only in online environments but also in terms of working collaboratively face-to-face with their native classmates. Perhaps as a result of this un-naturalness of collaborative practice it appeared that the teachers' decisions to allow for more flexibility and freedom was often interpreted by students as indicating a lack of guidance and resulting in disorientation and limited student participation. These teacher and student attitudes were in accordance with Grant's (2009, p.114) findings who reasoned that collaborative practices 'did not transcend the socially and historically determined practices of the classroom' and suggested that 'rather than focusing on the design of technologies, or on removing barriers to achieving the perceived potential of technology, the total ecology of the classroom

needs to be considered (ibid, p.115). These findings would seem to chime with other studies' highlighting of the key supporting role of teachers in modelling and facilitating any eventual collaborative practices and students' interaction (Lund and Smørdal, 2006; Loveless, 2007). Additionally, apart from the importance of the role of the teacher as a facilitator, O'Dowd (2007b, p.21) has argued that 'not only must online activity make sense in the particular learning context, but the communication tools must also be seen as appropriate by the learners for the particular task at hand'.

From a technical perspective the students in the present study did not appear to suggest any major difficulties when it came to familiarizing themselves with the use of web 2.0 tools such as blogs and wikis – echoing the findings of other studies who suggested that a large proportion of young people who 'are more likely to come from media-rich homes, are more confident about their skills' (Helsper and Eynon, 2010, p.515). However, observation and interview data demonstrated that many students lacked the skills and 'know-how' in terms of using these technologies for collaborative writing and taking advantage of their more advanced and sophisticated properties such as editing content, linking and commenting. In reality, many students' engagement with such web 2.0 tools appeared to be unadventurous (if not conservative) and often replicated their typical classroom practices of working individually and uploading new or adding to existing content.

As Lin and Kelsey (2009, p.145) described from their own research, 'collaborative writing and learning were the exception rather than the norm among participants in the early stages of wiki work'. This again suggests that instructors should provide 'highly supportive learning experiences to teach students how to use wikis and how to work collaboratively when implementing wikis to maximize the benefits of this emerging tool' (ibid). Additionally, the findings of the present study highlighted the importance of time and group size – echoing the findings of Naismith *et al.* (2011, p. 13) who argued that 'time is needed to become familiar with technology and with working collaboratively – with more time and smaller groups, students may have become more confident in working collaboratively and editing each other's work'. Moreover, as other similar studies have suggested, when working with less familiar tools such as wikis, for example, it is necessary to train teachers and students so that they can make full use of the various image, sound and editing options (Wheeler *et al.*, 2008; Ducate *et al.* 2011).

This issue of web 2.0 tools and applications being used in rather limited manner was in line with the findings of Grant (2009) and Engstrom and Jewett (2005). In particular, similar to what these researchers described, there was limited student engagement with the wiki technology, mainly restricted to adding content and creating new entries to the expense of editing and improving the contributions of others or commenting. Most of the study data suggested that 'web 1.0' practices were being imported in the 'web 2.0 environment' such as uploading documents or copying and pasting in bulk from online resources. Rather than engaging in collaborative writing, the students (and teachers) appropriated the wiki tools into online repositories for 'one-way dissemination' (Crook *et al.* 2008b, p. 129). Last, similarly to Cloke's findings (2010, p.377) the majority of introductory contributions by students on all projects 'used only traditional "text"' and there was minimal use of hyperlinks, images or videos.

Likewise, student engagement with the tools was in accordance with the findings of recent studies of wiki use in secondary classrooms, which reported, that 'editing others' work did not align with the accepted shared practices of the class' (Grant, 2009, p.111; Lin and Kelsey, 2009)). Additionally, not all students welcomed the idea of their work being edited by others (Lund, 2008) whilst others complained of uneven contribution to the collaborative activities of the project – suggesting that 'social loafing is sometimes observed where the contribution rate for some students is disproportionate to others' (Wheeler *et al.* 2008, p.990). Moreover, the findings from the present study were similar to studies on wiki use that reported high levels of overall participation but little evidence of collaboration – with, at best, a preference for 'cosmetic' rather than substantial edits prevailing (Judd *et al.*, 2010). Additionally, the students in the eTwinning cases could not be said to have immediately embraced 'any notion of collective ownership or epistemology but continued a practice where the institutionally cultivated individual ownership persisted' (Lund and Smørdal, 2006, p.41).

While all the leading teachers in the four schools appeared enthused by the potential of ICT implementation to facilitate their eTwinning activities, their level of confidence and commitment to using digital technologies varied across cases. For instance, some teachers appeared less confident and more cautious with using the different tools and developed a more limited working competence with the various

tools. In this sense, the present study echoed the findings of a survey of English schools that suggested that although access to and availability of technology has improved, teachers' confidence both in secondary and primary education has decreased compared the last couple of years (BESA, 2009). In this sense, teachers' enthusiasm to embrace the use of new technologies can be seen to mirror what Perrotta (2011, p.3) described as responding to the implicit pressures within contemporary schooling to 'look innovative' whilst 'struggl[ing] to comprehend the instructional and pedagogical purposes of technology use in their classrooms'. Similarly, Merchant argued that teachers 'have been encouraged, persuaded and trained to incorporate new technology, but this has often resulted in a bolt-on to standard classroom practice' and, as such, 'there is a pressing need to develop models of classroom practice that illustrate the communicative potential of new technology (2005, p.59).

Thus, while conditions may have improved in terms of technological infrastructure over the past decade, a 'cultural mismatch' appears to persist between the more radical potentials of digital technologies and the tendency for students and teachers to employ 'familiar strategies for designing and completing assignments when collaboration proved challenging' (Forte and Bruckman, 2007, p. 39). In particular, schools' imposed timeframes combined with dominant assessment regimes and the pressure applied to teachers to produce tangible outcomes with regards to formal examinations was reflected in the limited time and effort that teachers and students were willing (and often able to) devote to the project. In particular, it has been argued that 'the structure and conception of school that evolved in the last century is quite incompatible with effective use of new technologies [...] The forty-five-minute period makes it difficult to accomplish anything substantial using technology' (Collins, 1996, p. 61 in Zhao and Frank, 2003). As such, the lack of any official authoritarian mode associated with the eTwinning activities, was compromised by more dominant institutional and organisational pressures within the English and Greek school systems. Even the most enthusiastic and motivated of the teachers soon realised that they had to 'go with the flow' of the enduring nature of school organisation and be more realistic about what they could achieve within the limited time they had at hand.

Overall, the findings highlighted in this study suggest that digital technologies and web 2.0 tools in and of themselves entail no transformative powers – instead it would seem that practical implementation can be affected by a range of socially-shaped realities. As Crook (2012) argued, we should not think about the notion of web 2.0-based collaboration in a totallising way. Any web 2.0 based collaborations are contextualised (by settings such as the school) and are therefore compromised by the nature of the offline settings. As such, ‘technology should not be understood to operate on a causal model; it does not have straightforward “impact” in some simple, mechanical way on the practices that it encounters’ (Oliver, 2011, p.381).

Linkages and disconnections with prevailing commentary on web 2.0

Having commenced this thesis by contrasting the optimistic and pessimistic scenarios surrounding educational technologies there is a pressing need to now consolidate the two and develop a more realistic and socially grounded approach. As described in Chapter 2, for many educationalists digital technologies are seen as containing an inherent power to reconfigure education and modernize schools. This enthusiasm is also echoed in the school collaboration literature where technology use has been central to recent forms of school ‘twinning’ with a view to supporting greater ‘engagement and community building’ McLoughlin and Lee (2008, p.641) and facilitating online interaction and breaking down geographical barriers (Forte and Bruckman, 2009). A sense of ‘boosterism’ also prevailed in the descriptions of the ‘digital natives’ or ‘iKids’ (Prensky, 2008) as well in the web 2.0 educational scenarios (see Green *et al.*, 2008; Richardson, 2009). At the other extreme, doomster scenarios continue to evolve around fears about the possible psychological, cognitive or social harm that new technologies can cause to students (Greenfield in Wintour, 2009) – resulting, for instance, in the creation of the so-called ‘dumbest generation’ (Bauerlein, 2008).

Yet, throughout the case studies presented in this thesis it would seem that neither the optimistic nor the pessimist scenarios are substantiated by empirical findings. This thesis’ portrayal of what actually takes place within school settings suggests that web 2.0 use is more often a case of ‘business as usual’. That this finding has not

been evident in much of the initial research conducted on educational use of web 2.0 is perhaps not surprising. A large number of initial large-scale surveys focused mainly on questions of access and infrastructure whilst smaller-scale research studies often addressed issues of a more technical nature. Therefore, since the current discussions surrounding web 2.0 do not provide a sufficient or realistic framework for web 2.0 implementation in education, and school collaboration in particular, there is value in summarizing the actual (rather than imagined) place and role of school collaboration in the twenty-first century.

To begin with, very little of the optimistic rhetoric in the literature resonates with this study's empirical findings of educational ICT engagement. Despite the initial enthusiasm in the current academic literature with regards to the teaching and learning potential of web 2.0 tools (see Davies and Merchant, 2009; Richardson, 2009), in practice no significant altering of educational processes seems to have taken place. Comparative findings across the four case studies demonstrated that although the number of computing devices per student in school has increased and no issues relating to lack of physical access were reported, the scenarios of 'e-schooling' have so far not come true. Additionally, the perceived 'always on' pattern of internet use (Ito *et al.*, 2008; Redecker, 2009) was not apparent in the findings of this research study. As such, although web 2.0 technologies may well carry promises for greater interaction and user-generated content creation amongst communities of users as opposed to passive consumption and broadcast forms of exchange, the so-called era of 'education 2.0' (Rosen and Nelson, 2008) has not arrived yet, at least in the four eTwinning case study schools of the present study.

In particular, analysis of the data has highlighted a likely gulf between the rhetoric of web 2.0 and the reality of actual in-school engagement with the technologies, illustrating that educators should be cautious about relying on these tools as a solutions for educational transformation. Indeed, when revisiting O'Reilly's (2005) 'meme map' that reflected the basic principles and practices radiating from the core of web 2.0 as presented in chapter 1, it can be argued that the idea that the web took the notion of participation and collaboration to a totally new level by allowing access to all users of the system did not signal any significant changes within an educational context since the technologies continued to be used as publishing tools (at least in the four case study schools). As such, recalling Beer and Burrows' (2007)

table of schematic differences between web 1.0 and web 2.0 it becomes clear that tools such as wikis were being used both by teachers and students in decidedly web 1.0 modes. Additionally, the present study highlighted clear disparities with regards to classifying teacher and student engagement with the particular tools. In line with Crook's (2008) taxonomy outlined in chapter 1, teachers' seem to have selected text-based tools such as wikis or the TwinSpace forum as vehicles for collaboration. These tools were seen to support the production and publishing of user-generated content and were associated with the 'expressive' human disposition. Conversely, the students pointed out that they would have preferred greater use of social networking sites and online chat tools – mirroring their own out-of-school engagement with such applications. Alongside their engagement with online gaming, students' ICTs activities was at large shaped around socialising the playful and the reflective according to Crook's taxonomy.

As such, the attempts to integrate these new technologies in the formal educational settings of the case study schools, and therefore, 'to fit the new into the pre-existing' (Bigum and Rowan, 2008, p.247), seem to have repeated a pattern of compromise that has existed in schools for some decades now. It could be argued that the more radical nature of web 2.0 tools did not translate well into contemporary classroom practices, resulting in procedural and rather uncreative engagement with the digital technologies. This is not to say that this lack of success to translate web 2.0 potential into web 1.0 classrooms was the result of teacher cautiousness or resistance to adopting more innovative practices as other studies have highlighted (Crook and Harrison, 2008). On the contrary, the teachers in this study appeared quite motivated to experiment with the new technologies since the particular choice of tools was not externally imposed but consisted a personal decision. Still, it often seemed that a range of 'old habits' prevailed in the case of both teachers and students and often resulted in retaining a 'one-to-many model of broadcast pedagogy' (Bigum and Rowan, 2008, p. 250). This has to some extent also been associated with the enduring school contexts that are often too rigid to bypass. As Luckin *et al.* (2009) noted:

The current contexts and cultures of schools often offer teachers limited scope to incorporate them [web 2.0 tools], with other requirements taking precedence, such as e-safety, privacy, hierarchical organisation and infrastructure, set bodies of knowledge, assessment, and a

long-standing pedagogical tradition that favours the individual over the group, the text over other modalities, and the enclosed environment over the open.

In other words, it is clear that there was a gap between the current opportunities generated by digital technologies and their actual or possible implementation in an everyday classroom. It seems that ‘this structure of experience for Web 2.0 collaborations does not fit comfortably the designs for such practices in the context of school’ (Crook, 2012, p.71). In particular, the collaborative qualities of the wikis in case studies 1 and 2 did not seem to lead to exemplary educational practices or suggest the creation of successful collaborative learning environments. In all four cases, students were found to import traditional school patterns of individual content construction and there was little or no differentiation between the use of web 1.0 and web 2.0 tools. For instance, these findings contradict the enthusiasm within academic literature regarding the interactive and flexible nature of wikis. In our cases wikis did not ‘lend themselves to collaborative activities’ (Wang and Beasley, 2008, p.80). Neither did they consist ‘an ideal framework for composing different time and place learning environments’ (Larsson and Alterman, 2009, p. 372) for students to ‘develop social ties’ (Wheeler *et al.*, 2008, p. 990; Elgort *et al.*, 2008).

In fact, student and teacher use of the wiki tools could be said to have closely echoed Crook’s (2012, p.71) conclusion that ‘the medium is not seen in terms of a site for the negotiation of knowledge – more as a depository’. Conversely, students’ decision to host informal discussions around other tools such as discussion forums and Facebook perhaps often reflects ‘the communication structure afforded by social networking sites where the sense of collaborating is captured by a more conversational flow’ (ibid). As such it could be concluded that tools such as wikis may well bear promises of greater conviviality and community building but in order for these promises to materialise there is a need to give more thought how their use is shaped by students’ familiarity with the communicative rather than collaborative opportunities of web 2.0 technologies as well as the current models of teaching and learning. Moreover, tensions resulting from lack of reciprocity from partner schools and students clearly influenced student engagement and the development of the projects. For instance, with regards to partner reciprocity the findings of the present study were in line with the findings of a HE collaborative project that reported:

As soon as students wrote in the wiki, they wanted to see reactions and feedback to their contributions and this did not always occur. It was de-motivating to wait for days or even weeks for an indication that they had an audience beyond the instructor (Cloe, 2010, p.382).

These tensions, also, chime with Rheingold's (2008, p. 99) observation of the importance of receiving feedback from an audience and how it is difficult to talk about a student voice 'if nobody seems to be listening'. Ducate *et al.* (p. 2011) have also highlighted how providing students with an audience other than their classmates can increase student motivation as well as accuracy when engaging with a particular task. Besides it has been argued that 'true collaboration is not a routine process, involves a shared need or motivation, and requires the meaningful participation of all those involved. The complementary skills of the participants are melded so that what results from the process of shared creation is more than what any of the individuals working alone could do' (Collis and Heeren, 1993, p.37).

As a result it can be concluded that implementing digital technologies within formal educational contexts, albeit within the framework of a rather flexible collaborative project, proved a rather compromised process. Despite the perceived educational opportunities of web 2.0 tools and their relevance with theories of knowledge-building networks and communities of practice, there was little evidence from the present study to suggest that the use of web 2.0 tools led to the creation of online communities of students across twinned schools or that the students formed online networks and effortlessly adapted to collaborative practices. As previously discussed, while there were distinct cases of students who displayed greater levels of engagement, these remained the exception rather than the rule. On the contrary, many students can be seen as proficient practitioners of the 'grammar of schooling' (Tyack and Tobin, 1994) – often unwilling to alter their classroom practice especially where adequate teacher guidance was lacking. As other commentators have pointed out, the role of the teacher in a web 2.0 environment should not be restricted to providing students the tools and allowing them to take their own initiatives but 'learners have to learn how to participate and collaborate, and teachers need to play a role in facilitating this process' (Grant, 2009, p. 113).

Rethinking the social context of online school collaboration

All of those issues and findings presented in the previous sections contribute to a growing realisation that online school collaboration is socially shaped rather than technologically driven. Despite some assumptions to the contrary, it would seem that one-size does not fit all and that digital tools do not provide a ready panacea for the successful implementation of collaborative projects. Context (or rather contexts) are a key factor in understanding the implementation of technologies in education and, therefore, online school collaboration is perhaps best understood when approached 'from a social point of view rather than from a technicist one' (Haythornwaite and Andrews, 2011, p. 225). As other commentators have also contented (see Miller, 2011; Selwyn, 2011a), the findings of this study appear to confirm that technologically deterministic approaches fail to take into consideration the social conditions that underpin the educational use of technologies. Overall, it has been argued that:

Any online activity does not exist in a vacuum, but rather belongs in a particular sociocultural context and its success depends on a complex array of external factors including learners' needs, expectations and lifestyles, institutional requirements and common online practices in a particular society (O'Dowd, 2007b, p.21).

On the basis of this study's findings, it could be argued that school collaboration is greatly dependent upon 'systemic' and 'pedagogic' factors rather than issues of 'technology' per se (Crook and Harrison, 2008). On one hand, these systemic reasons are associated with technical impediments such as unfamiliarity with the tools as well as registration and access problems. In this sense, technical issues did not relate to physical access to ICTs and connectivity even in the cases of the less advantaged Greek schools. These findings bear similarities with other research studies that have described similar 'inhibitors', issues and tensions surrounding ICT implementation in the classroom (see Meadows, 1992; Tella, 1991; Valentine and Holloway, 2001). On the other hand, a bigger challenge seems to be how to transform rigid pedagogic practices and succeed in incorporating the potential of new tools to well-established classroom patterns. These concerns tie in with the findings of Luckin *et al.* (2009) and the discussions about how the use of educational technologies during the past decade has not been successful with bringing about any substantial changes or a striking transformation of education. As Bigum and Rowan (2008, p.247) reasoned:

The deployment of increasingly powerful computing and communication technologies has had a profound impact on the way the world now works. Curiously, though, institutions of formal education in the main appear to have been least altered...The logic is to fit the new into the pre-existing, to integrate... An integration mindset privileges existing ways of doing things. It reflects a view of linear, manageable change and, to date, has allowed teacher education and schools to keep up technical appearances.

The primary disconnect between the collaborative nature of the projects/tools and the practical realities that prevailed in all four case studies can be seen to have been forged by a range of socially-shaped realities of schooling that are better understood in terms of Kozma's framework presented in chapter four. In particular, the range of actors and factors that shaped the use of digital technologies and the outcome of the four collaborative projects ranged from the motivations and skills of individuals at 'micro' level to the wider pressures of time, fit with curriculum and assessment regimes at 'meso' level as well as the overarching role of the eTwinning organisation at 'macro' level of analysis. Additionally, although at first glance these collaborations emerged as the product of individual enthusiastic teachers, a more substantial analysis revealed that they were also shaped by a range of internal and external imperatives (Selwyn, 2011b) such as the need of both teachers and schools to 'keep up' with the fast-changing field of ICTs and embrace new and ever-evolving pedagogic forms.

Still, this research study showed that, despite the initial ambitions and expectations of the participants, a range of pragmatic problems shaped the final outcome of these efforts and resulted yet again in another cycle of 'hype, hope and disappointment' which has characterised the implementation of education technology since the 1980s (Cuban, 2001). Indeed, it can be argued that the current gulf between the rhetoric and the realities of ICT classroom implementation highlights how the assumptions about the potential of digital technologies should not be viewed outside the wider context of what Tyack and Tobin (1994) described as the 'grammar of schooling'. The wider picture of using digital technologies for school collaboration presented in this study points towards the obvious disparities between the collaborative opportunities offered by the tools and the realities of how they were actually used in the classroom. In the light of all the above arguments, it is crucial to recognise the often constraining nature of these different actors and factors that shape the implementation of digital technologies for school collaboration at different levels of analysis.

For instance, the issue of time as an inhibitor has recurred across the four case studies in a range of forms and has largely shaped the use of and engagement with digital technologies - echoing Lortie's (2002, p.xii) line of reasoning that 'time is the most scarce resource in schools'. In particular, from an individual level, perspective lack of time was reported by both teachers and students as a major inhibitor resulting in on-going day-to-day negotiations of how to fit the projects activities in their busy everyday schedules. Lack of time was also associated with the rigid organisation of the timetable within an ordinary school day. As Collins (1996, p. 61) reasoned:

The structure and conception of school that evolved in the last century is quite incompatible with effective use of new technologies. The view of teaching as transmission of information from teachers to their students has little place for students using new technologies to accomplish meaningful tasks. The forty-five-minute period makes it difficult to accomplish anything substantial using technology.

In this sense, from an institutional level perspective these issues of time were related to other factors such as assessment regimes and curriculum pressures whilst the appropriation of digital technologies in schools also depended on 'schools' reliance on rigid timetables and scheduling' (Selwyn, 2011a, p.28). Moreover, at macro level of analysis although the teachers were given the opportunity to take part in face-to-face or virtual training seminars organised by the Central or National eTwinning services, this was only possible during after-school hours at the expense of their personal free time. As Banaji *et al.* reasoned (2010, p.6) from a recent study on Creativity and Innovation in Education in EU Member States 'it seems that [technology-based] creativity and innovation are stifled by an overloaded curriculum, by lack of time for flow in the teaching and learning schedule, by other systemic barriers such as summative assessment and league tables' – highlighting how 'all these practices need time and space out of scheduled time-tabling to engage in more creative and innovative activities'.

Acknowledging the limitations of the present study

Of course, the restrictions of one doctoral study do not allow for a totally exhaustive analysis of every aspect of digital technologies for school collaboration. As such, there are unavoidable gaps and issues that certainly merit further consideration if sufficient time and word-count were available. For example, the perceived technical

issues that emerged when implementing the various digital tools have been outlined but were not explored at length. Neither, was the students' out-of-school use of technologies portrayed in exhaustive detail. These omissions have been, however, deliberate since the aim of this thesis was to look at the 'wider picture' of web-based school collaboration rather than focus on the use of particular technologies and tools. As discussed in the first three chapters, considerable attention has been given within academic literature to a range of ever-changing tools adopted within educational contexts but relatively little attention to the other issues that underpin the practices and activities of online school collaboration.

Similarly, certain limitations with regards to the content of this study need to be acknowledged. For instance, this thesis has not explored in depth the issues surrounding employing digital technologies in the classroom that are often associated with a 'new literacies' approach *per se* (Buckingham, 1993; Davies, 2008; Lankshear and Knobel, 2006; Marsh, 2007). However, it has become clear that as the thesis has progressed online collaborative practices can be seen falling under a new literacies umbrella and this is further discussed in the next section of this chapter. Also, it could be argued that another gap arises from the decision not to research the eTwinning policy-making process and collect data from the official eTwinning authorities. However, this was a carefully considered decision based on mapping out the literature and establishing that the aim of the study was to capture the teachers' and students' experiences and perceptions of eTwinning.

A different limitation was the complexity of carrying out field work in real-life classrooms across different countries. Because of the multifaceted nature of the study, it was not possible to capture what went on in all eight classrooms across five different countries during the same academic year. Therefore, after careful consideration many decisions had to be made about the data collection. For instance, it was decided that visiting all partner schools was not realistically possible when considering the interview timings and time for class observations across all schools and that the focus of the field work would be the English and Greek classrooms.

Another challenge was collecting data from the partner schools. It was decided that, alongside the email interviews with the teachers, a blog would also be employed to host all students' perceptions of eTwinning with the intention of capturing the

interest of all the other participating students (see Appendix 12). Thus, a blog was set up and introduced to the English and Greek students during the focus-groups interviews whilst the link was distributed to the partner teachers with the request to forward it to their students. However, no entries were uploaded by the students despite their initial positive reaction towards participating in the blog during the interviews. In retrospect, closer consideration should have been paid to the type of tool that would have perhaps appealed more to the students. Still, the online nature of the projects allowed having access to a range of data online - reconciling to some extent for the missing evidence from the partner schools and allowing this study to capture various snapshots in time of all four projects. Thus, despite the various restrictions and limitations with regards to data collection these snapshots not only pose interesting questions but also point to directions for further research.

In addition, the approach and theoretical concerns of this study led it towards the description of often mundane and unspectacular classroom practices. Compared to previous research this study set out to produce a realistic account and it is acknowledged that the case study chapters might at times appear to the reader unnecessarily descriptive of the mundane details of these projects' failure to progress smoothly. However, it can be argued that what is often missing in academic accounts of digital education is exactly such accounts. Indeed, a number of celebratory 'success stories' have been published by the Central Support Service for eTwinning, showcasing examples of good practice across Europe. In contrast, the aim of the present study was not to focus on exemplary case studies but to select a range of different 'typical' projects. Thus, dull as the descriptions contained in this thesis may be, these are the kind of accounts that need to be made if we are to move beyond the current hype surrounding the educational use of digital tools.

Last, it should be noted that, despite the range of data that were able to be collected, these four case studies represent just a snapshot in time and only glimpses of what took place in the four projects and it should be acknowledged that the geographic disparity of the sample schools and their partners would have benefitted more from the involvement of more researchers. Furthermore, a larger, longitudinal study of cases across more participating countries and over the course of more than one academic year would have allowed observation and comparison of several projects at different educational sectors and environments. Such an approach would have

allowed a better understanding of web-based school collaboration in terms of the wider social structures that surround eTwinning activities and practices. As such, having acknowledged the different sources of limitations and based on realistic accounts of what the technologies were being used for, we can now go on to make some suggestions for the future and look at what the ways forward are.

Towards a framework for future research and discussion of technology and education

As has just been reasoned, rather than embracing an idealistic approach that focuses on forward-looking perspectives of what *could* happen once the latest digital tools are implemented to collaborative initiatives, it has emerged from this thesis that the academic study of online school collaboration certainly benefits from adopting a more realistic approach. Notwithstanding the importance of the opportunities afforded by the various tools to link partners across countries, as the data suggests it is the pedagogical practices that can ‘make’ or ‘break’ collaboration. Although as Selwyn has argued (2011b, p.167) ‘predicting the possible new shapes and forms of educational technology is fraught with difficulty’, there are some more specific suggestions for the future that could address and perhaps resolve some of the crucial issues associated with online school collaboration.

First, as Cachia *et al.* (2010, p.7) suggested ‘more research should be undertaken on how technologies are appropriated by teachers, in order to support them in developing more efficient pedagogical and innovative usage of the technologies for learning’. In the case of this thesis, developing a rich understanding of the everyday realities of web-based collaborative projects and adopting Kozma’s (2003) framework for promoting changes is the first step towards materializing the potential for digital technologies to become little more than a short-lived ‘fad’. These changes should address issues at all three levels of analysis starting from the core and moving towards the macro-level factors and actors (see figure 11.1).

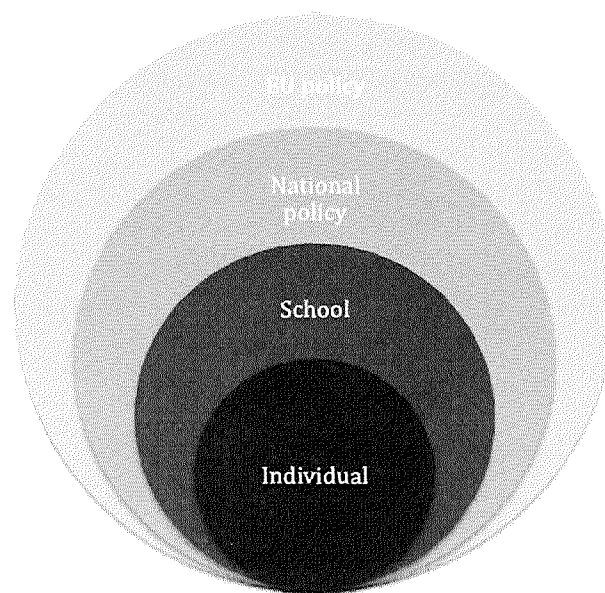


Figure 11.1: Implementing change at micro-, meso- and macro-level actors (adapted from Kozma's (2003) framework)

Teachers and students lie in the core of all collaborative projects and their engagement with the activities is largely dependent on their educational and technological experiences. As Buckingham (2007, p. 179) reasoned 'the school could and should be playing a much more positive role in providing both critical perspectives on technology and creative opportunities to use it'. In this sense, in the absence of examples of good practice and previous collaboratives experiences within the context of the classroom, it is not surprising that collaboration was not particularly successful and that online engagement predominantly mirrored classroom practices. Additionally, we should remain wary of simplistic assumptions and loud claims with regards to how net-savvy students actually are. As such, the first suggestion is to familiarise students with tools that they could be unaccustomed to and at the same time forge collaborative pedagogies during face-to-face interactions. As Dooly *et al.* (2008, p.82) argued 'training the students is *more than just getting them used to the technical aspects*; it is also getting them to *reflect on their roles and responsibilities* in the interaction-taking place in the ICT format'. Once students become familiar both with the tools and the collaborative practices, the transition to the the online environment could be smoother. In order, however, to promote such a collaborative-centred design adequate teacher training and support is required which

will embrace not just the technical issues of using the technologies but also the pedagogies associated with collaborative environments:

There is a strong need for pedagogic training which empowers teachers with the required ICT skills to help their students become digitally competent on the one hand, and for guiding students towards more exploratory and creative interaction with ICT tools on the other hand (Cachia *et al.* 2010, p.7)

As this study has highlighted even in the most high-tech classrooms the tools were not sufficient to lead an online transformation or meet the unrealistic expectations of what a collaborative project *should* achieve if the relevant pedagogies were absent. As Burns and Bodrogini (2011, p.188) noted ‘tools themselves do not make a community. Instructional design is critical in maximizing the creative and communicative potential of web 2.0 applications’. However, clearer, confident and more structured guidance from the teachers might enhance student engagement with the collaborative tools and lead to more creative practices. Moreover, educators should be cautious that in order to address the disconnectedness between different expectations and (lack of) motivation and reciprocity within and across teams, the topic and tools of the collaboration should be collectively adopted and approved by both students and teachers across all partner schools and not imposed on the students.

In addition, more time and space should be allocated for these type of interactions so that the participants can develop trust, build an online community, familiarise themselves with the digital tools and experience a sense of belonging. As previously discussed, time was reported as one of the major inhibitors along with curriculum pressures and assessment regimes. Making more time within the school organisation for eTwinning activities, however, requires deeper, long-term structural changes at both meso and macro-level and can only be initiated by national Ministries and implemented through national policies. At EU policy level, it would be recommended that eTwinning officials should not only address the range of technical difficulties reported by participants and create a more user-friendly online platform but also try to bridge the gap between the rhetoric of eTwinning as a collaborative initiative and the realities of the educational systems within which it is situated. Once they develop a better understanding of the range of issues and tensions that surround the institutional implementation of online school

collaboration they will be able to reshape the focus of their teacher training events and other activities that have so far been rather technologically-determined.

The findings reported in the present study with regards to students' current digital literacy practices highlighted on one hand the disconnections that need to be addressed and on the other the possible opportunities that can be developed in the future. In this sense, it is significant to reconsider the notion and role of literacy within an educational and collaborative context. According to Merchant (2009, p.107):

As formal education begins to appropriate and repurpose Web 2.0 technologies, I argue that there is a need to re-examine pedagogical principles and ask ourselves whether we imagine that these technologies will perform old routines more effectively, or whether they really can be transformational, and, if so, how. In order to do this it may be necessary to reflect on deeply held beliefs about the enterprise of education, theories of learning, and the role of new literacies in the curriculum.

Notwithstanding the importance of digital literacy, this study highlighted the need to address the notion of what can be termed as a specifically 'collaborative literacy'. The idea that technologies, or rather the implementation of technologies in collaborative projects, will somehow transform online collaborative practices is rather overstated and born out of technological determinism. It can be argued that a perceived shift towards more creative and collaborative school partnerships is possible but is greatly dependent upon the participants' experiences and 'collaborative literacies'. Adopting Davies and Merchant's (2009) framework of 'conditions for learning through participation' there are four issues that need to be reconsidered so that future projects might translate into more successful collaborations. In brief, they are firstly the notion of 'purpose' which can be interpreted as 'the need to be clear both about the sort of purposes the Web 2.0 services normally serve and about the specific goals that educators have in mind' (ibid, p. 106). Also of significance is the notion of 'participation' where 'learning through social participation may well require a more authentic conception of what constitutes worthwhile knowledge than that found in many curriculum documents' (ibid, p.107). In addition, the issues of forming partnerships and the importance of having co-producers – participants who are able to comment, give feedback and generate their own content. Finally, we should consider the importance of careful planning that allows for creativity and takes into account students' existing knowledge and experience.

In order to create these new conditions and since a lot of the issues relating to unsatisfactory implementation of digital technologies were associated with the lack of ‘goodness of fit’ between the aims of the projects and the school structures, it is necessary to make changes towards ‘loosening up’ the rigid nature of schooling as well as encouraging a ‘loose use’ of ICTs (Selwyn *et al.*, 2010). This would involve not just allowing for more time within the curriculum to engage with such projects but also ‘rethinking the places, spaces and times within the school day where ICTs may be used’ (ibid, p. 163). This, in turn, would encourage both teachers and learners to experiment and familiarise themselves with more informal, interactive and collaborative types of in-school technology use – leading perhaps to fewer practices of importing of ‘web 1.0’ habits in ‘web 2.0’ online environments.

Furthermore, as highlighted in the research findings the role of the teachers is critical in determining the outcome of the projects in terms of both encouraging and orchestrating student participation and engagement. In this sense, there is a clear need to equip teachers with both the technical know-how in terms of using digital technologies confidently but also the pedagogical skills to support and guide their students effectively and coordinate online collaborative projects efficiently. For this to work, it is also important to re-examine the role of the teacher and create time and space in his/ her hectic school day for engagement with such activities. In contrast to the ‘anti-schooler’ discourses presented in Chapter 3 that embrace the abolishment of traditional forms of schooling and envisage the establishment of new, ‘virtual’ types of school, the role of the teacher in orchestrating online collaborative projects and facilitating engagement with digital technologies could not be more central. Inevitably, due to the ever-changing and evolving nature of digital technologies teacher training needs to take place on a recurrent basis. However, once armed with a more holistic, pedagogical understanding of collaborative practices as well as ‘trouble-shooting’ experience, it should be easier to acquire the technical skills to use the different tools and the pedagogical skills to promote collaborative practices in the classroom.

Within a broader educational context, I would suggest the following research agenda for action: i) Making better use of the existing evidence in research findings and literature and looking at the patterns emerging from the hitherto isolated studies of web 2.0 use so that one can critically evaluate and assess them to form realistic

expectations of classroom use and inform future practices, ii) Facilitating a more sustained, rigorous, larger-scale, cross-sectional type of research in order to form a more holistic picture of the realities of web 2.0 practices in 'real life' as opposed to 'model' educational settings, leading perhaps to a clearer picture of the present and more reasonable expectations for the future, iii) Promoting an interdisciplinary type of research across multiple settings and contexts in order to gain deeper and better understanding of the different elements of web 2.0 in education - pulling together not only the educators and the technologists but also academic researchers from the fields of sociology, neuroscience, psychology, media studies and so on to look at the many different aspects of web 2.0 use in educational settings and iv) Finally, there is a need to open up a dialogue about web 2.0 and education beyond the educational and academic communities and start a bigger, critically informed conversation that will also engage parents, policy-makers, employers, the IT industry and other stakeholders.

Last, before the educational technology community perhaps gets too enthusiastic with the potential of web 3.0 or the semantic web and turns its attention, for example, towards the educational opportunities of 'cloud computing' (see Green, 2011), it might be worth investing more time, effort and thought on reflecting on the present and working out ways of appropriating digital technologies more successfully in the future. The messy and compromised realities of educational use of digital technologies for school collaboration should not overshadow the undoubted opportunities of such tools and collaborative initiatives. At the moment it could be argued that too much emphasis has been placed on the 'individual' (be it the teacher, student or technology) at the expense of full consideration of the significance of the social contexts of web 2.0 use and non use in education. If we can move beyond the hype of web 2.0, open up these contextual conversations and work towards a more realistic and robust set of expectations, perhaps, digital technologies may be better appropriated for future collaborative projects.

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Appendices

Appendix 1: Table of NGO initiatives	320
Appendix 2: Example of semi-structured interview guide	322
Appendix 3: Example of focus-group interview guide	324
Appendix 4: Using the wiki in creole format.....	325
Appendix 5: Using the wiki in html format	326
Appendix 6: London suburban case study - class observation 2	327
Appendix 7: Berlin students word file on Potsdam	328
Appendix 8: Marla's favourite film	329
Appendix 9: Stuart's favourite film	330
Appendix 10: Field note excerpts from phase II (Athens suburban school).....	331
Appendix 11: Field note excerpts from phase I (Athens suburban school)	332
Appendix 12: Screenshot of blog created for students.....	334

Appendix 1: Table of NGO initiatives

NGO INITIATIVES			
Charitable Organisations and Agencies			
Initiative	Description	Tools	Fee
Achievers International www.achieversinternational.org	Online enterprise project for students, encouraging them to understand international trading. A group of students and their teacher form a company, and import and export goods with a partner school overseas.	Online training materials Video Conferencing	£100 (to work with one partner school) £50 (for each additional partner school)
Africa Experience www.africaexperienceuk.com	A range of workshops in London to children and teachers based around African art and culture. Assistance in linking UK with Ugandan schools	Books, music, musical instruments, toys etc.	Charges applicable for buying or renting resources.
African Revival www.africanrevival.org Zambia/ South Sudan	Schools Linking Programme: schools from Northern Uganda and the UK since 2006 establish financial and educational linkages.	Exchange of letters, poems and project work	UK schools raise a minimum of £350 a year for their Ugandan partner school
AfriTwin www.afritwin.net	Promotes interactive learning, global citizenship and life skills. One UK school is linked with two South African schools (one urban, one rural).	Email Exchange visits	N/A
Arctic Voice www.arcticvoice.org/	Linking up UK schools with indigenous communities and schools in the Arctic so as to raise environmental awareness.	ICT (emails, forum, video conferencing)	N/A
Japan Society www.japan21.org.uk	Assists schools in the UK and Japan to find and develop successful links.	Resource packs, internet-based projects	No fee. (funding available through the British Council).
Link Community Development www.lcd.org.uk	Facilitate linking between schools in Ethiopia, Ghana, Malawi, South Africa and Uganda and the UK, Ireland and the USA.	Letters, postcards, drawing and other resources. Teacher exchange visits.	Fee applicable to non African participants.
Link Ethiopia www.linkethiopia.org/	School linking between schools in Ethiopia and the UK. Supporting education in Ethiopia and increasing cultural awareness between young people.	Letters, drawings, blogging. Teachers and senior UK students' visits.	Fee (more details providing upon request).

Plan UK www.plan-uk.org/	School Linking between schools in the UK and Kenya, Malawi or Sierra Leone	Educational resource pack including lesson plans, photos, videos and artefacts. Webspace for communication.	£600 Funding by DCSF applicable.
Rafi.ki www.rafi.ki	Online learning community that promotes global school partnerships, transforming pupils into global citizens.	Email, chat, video conferencing, creation of webpages, IM.	Free for non-UK schools. Membership fee for UK schools.
Relief International - Schools Online schoolsonline.org/	Network of Internet Learning Centres established in 17 countries to facilitate collaborative educational activities.	Online communication with peers. Exchange visits	No fee.
Sound Affects www.soundaffects.org.uk	Links children across the globe through the medium of high quality audio. (UK-Ghana, 2008-2009, UK-Sri Lanka, 2009-2010)	High quality audio files.	N/A.
UKOWLA www.UKOWLA.org.uk	Support mutual beneficial partnerships between communities in the UK and Africa, Asia, Latin America and the Caribbean.	Chat room, message board	Various types of membership fees.
Christian missionary Delegations			
Initiative	Description	Tools	Fee
Mida-International www.mida-international.org/	Facilitates school twinning between UK and African schools. A mission network, constituted as a Christian charitable trust.	Mail, phone, internet (if applicable).	No fee. (Donation welcomed)
Starfish Malawi www.starfish-malawi.org.uk	Christian organisation that seeks to promote education, vocational training and AIDS awareness. Further aim to link 100 schools in Malawi with UK schools.	N/A yet.	N/A yet.
Smile International www.smileinternational.org	Twinning schools in the UK with schools in Africa, Asia and Europe so as to share experiences and develop mutual understanding.	Letters and/or emails. Teachers' exchange visits.	No fees but fundraising or sponsoring a 'shoebox' is welcomed.

Appendix 2: Example of semi-structured interview guide

Interview guide for semi-structured interviews with participating teachers (phase I)

Introduction:

My name is Anastasia Gouseti. I am from the Institute of Education in the UK and I would like to talk about your experience with eTwinning. I am especially interested in knowing more about the benefits that emerge and the difficulties you face when participating in eTwinning projects, as well as the use of technology to facilitate online communication and collaboration. Finally I would like you to share your views on how students perceive and experience eTwinning.

It would be good to have a general talk for about 30-45 minutes and I thank you in advance for your time. Do you object if I record the interview on this – it saves me having to write everything down and allows me to concentrate on our discussions? I am an independent researcher and not involved with the eTwinning support services. I can assure you that what you say will be anonymous and I won't use any real names.

BACKGROUND:

- How long have you been teaching?
- Have you taken part in eTwinning before?
- Have you taken part in similar projects before?
- Can you give me some more details on your previous experience with eTwinning?
- What motivated you to get involved?

CURRENT PROJECT:

- Describe current project
 - topic
 - scope
 - goals
 - outcomes
 - drivers (personal, schools, pupils...)
- How did you find your partner?
- Project related with other actions?

DIFFICULTIES:

- Finding partners
- Equal engagement and contribution
- ICT infrastructure
- in using ICTs (e.g. twinspace)
- Support from Headteacher and other members of staff
- Time problems
- Language problems
- Lack of interest by pupils
- How does eTwinning fit with other aspects of school such as:
 - time
 - curriculum / assessment / exams

IMPACT/ GOALS (personal level):

- Foster collaboration amongst EU teachers
- Improve your ICT skills
- Improve your language skills
- Learn about other systems and countries

IMPACT/ GOALS (student level):

- What are the perceived benefits for students?
 - language skills
 - collaborative skills
 - ICT skills
 - Subject-related skills
 - Peer-learning
 - Motivation
 - Enhance their sense of European dimension
- Did they enjoy their participation in eTwinning?
- What did they think of it?
- What do they think they are doing?

IMPACT/ GOALS (school level):

- What are the perceived benefits for your school?
 - become known
 - win awards
 - improve school profile

TOOLS:

- Which tools did you use?
- Why did you choose these tools? (eg. You were familiar with them, easy to use...)
- Which tool worked best?
- Comparison with other tools used in previous projects
- What would you want to be using?
- Why aren't using it now?
- Future use?
- Benefits or obstacles emerging from the use of these particular tools

TIME:

- During school time?
- Out-of-school involvement?

Lastly, is there anything else you wanted to say that we haven't covered?

Thanks and good luck with your future eTwinning projects!

Appendix 3: Example of focus-group interview guide

Focus-group interview guide for phase 1 of data collection

Introduction:

My name is Anastasia Gouseti. I am from the Institute of Education in the UK and I would like to talk about your experience with eTwinning. I am especially interested in knowing more about what you like most about the projects and what difficulties you have faced. I would also like you to talk amongst yourself about your experiences with new technologies and the internet.

It would be good to have a general talk for about 45-60 minutes and I thank you in advance for your time. Do you object if I record the interview on this – it saves me having to write everything down and allows me to concentrate on our discussions? I can assure you that what you say will be anonymous and I won't use any real names.

Out-of-school use of ICTs

- Do you have a computer at home?
- Which technologies do you use in your free time? (MSN (IM-chat), MySpace, Facebook, YouTube, blogs, wikis, downloading music, films, online gaming)
- What do you use them for? (homework/ entertainment)
- How long do you spend approximately every week online?

In-school use of ICTs

- Do you use the computers at school?
- How often do you use them?
- What do you use them for?

eTwinning project

- What is your experience with the eTwinning project in your school so far?
- Have you been involved in this kind of project before?
- What do you think you are doing in the project?
- Why does the school have this project?
- What tools do you use?
- What do you think of these tools?
- What do you particularly like about the project?
- What's fun about it? What's not fun? Why?
- Is there anything that you don't like? (computer access, difficulties with the tools/language)
- Do you have any suggestions on how to improve what you are doing with eTwinning?
- Can you think of a better thing to be doing?

Appendix 4: Using the wiki in creole format

FrontPage

Content **Details History Incoming Links Outgoing Links Attachments** **Help**

Format : Create ↕

1

Syntax help

Text styles

```
//italics//  
**bold**
```

Headers

```
== Large heading ==  
=== Medium heading ===  
==== Small heading =====
```

Links

```
[[Link to a page]]  
[[http://www.liferay.com|Link to website]]
```

Lists

```
* Item  
** Subitem  
# Ordered Item  
## Ordered Subitem
```

Images

```
{{attached-image.png}}  
{(Page Name/other-image.jpg|label)}
```

Other

```
<<TableOfContents>>  
{({ Preformatted })}
```

[Learn more »](#)

Categories **Select categories**

Tags **Add tags Or Select tags** **Suggestions**

Summary **New**

☒ This is a moment

Appendix 5: Using the wiki in html format

The screenshot shows the Microsoft FrontPage 2003 application window. The title bar at the top reads "FrontPage | Recent changes | All pages | Droner Pages". The main menu bar includes "File", "Edit", "Format", "Tools", "Window", and "Help". The "Content" tab is selected in the "Content" group, with other tabs like "Style", "History", "Incoming Links", "Outgoing Links", and "Attachments" visible. The "Format" dropdown is set to "HTML". The toolbar contains various icons for text formatting (bold, italic, underline, link, unlink, list, indent, outdent, decrease indent, increase indent), alignment (left, center, right, justified), and other functions (undo, redo, find, replace, insert, delete, copy, paste, source code, preview, help). The main workspace is empty.

Appendix 6: London suburban case study - class observation 2

Class observation 2: 25 March 2010 (13:55- 15:10)

14:40 Flora and Marla also finish the test and the teacher asks them to either log on Wikispaces or read something and they both log on two adjacent iMacs a couple of desks away from Stevie. They chat to each other and the teacher asks them to stop and be quiet since not all students have finished the test. Eventually Marla changes seats but she just moves next to Flora again from the right to the left hand side.

Stevie asks the teacher 'How do you say "the best song ever"?' and the teachers tells him in German how the phrase is.

'What are we supposed to do?' Marla wonders at some point. This makes sense as the teacher has given them very general instructions to work on Wikispaces, without specifying what to do exactly.

Stuart, Sarah and Nicholas (who have also finished the test) read German magazines.

Flora googles the phrase 'sign language' whilst Marla works on the wiki.

14:51 Stevie is looking for something on the school's website whilst Flora is typing 'sing language alphabet' in about.com and then she opens a page on Wikipedia.

Then the two girls start 'chatting' again on the Google search bar (Flora) and the wiki's web address bar (Marla)!!

As Flora uses the Google bar on the sing language page on the Wikipedia page Isabel notices it and although she hasn't realised that they are chatting, she figures out they are not working and then she asks them 'what are you doing there?' but they just giggle in reply.

The teacher goes away and Flora keeps reading about and practicing sign language.

Nicholas, Stuart, Sarah and the new girl continue reading German magazines.

Janice is still doing the test.

The teacher is tidying up papers.

Flora switches between Wikispaces and the sign language website whenever she feels the teacher is watching her.

Stevie and Marla are the only ones who actually do a bit of work on the wiki and appear quite engaged with it.

When Janice finishes the test the teacher asks them if they want to play a board game as it's only 10 minutes left before the class finishes and they all gather at the front of the room in the space between the whiteboard and the desks, sit on the floor and start playing the game.

The project or Wikispaces in not mentioned again, neither are the students assigned anything for homework and they leave when the bell rings.

Appendix 7: Berlin students word file on Potsdam

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Appendix 8: Marla's favourite film (uploaded on the wiki as a Word document)

Movie

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Jim Carrey

Jim Carrey ist ein sehr gutes actor. Er kann alles spielen, von jesus, zur ein grunes mann. Er ist in sehr viele filmed das ich mag. Er war in Evan Almighty, The Mask, Ace Ventura, Me Myself and Irene, Liar Liar, und Yes Man. Alle von seine filme sind sehr lustig, und haben gute themen. Er hat schon 11 oscar nomanations! Jim macht keine neue filme jetzt, aber ich bin sicher er will.

Appendix 9: Stuart's favourite film (uploaded on the wiki as a Word document)

Der name aus der filme ist „Kevin-allein zu haus“.

Kevin ist eine acht jahres alte jungen aus Chicago. Siene Eltern gehen aus ferien aber Kevin ist immer noch aus das haus. Kevin ist sehr freue das er allein bist, aber whan zwei räuber finde das Kevin ist allein, er wird verängstig. Aber Kevin entscheiden zu verteidigen seinem haus. Kevin einerichtet das haus mit sehr viele fallen. Wann der räuber aus Kevin's haus kommt, sehr viele schlechte dinge passieren. Das ist so lustig zu sehen. Kevin ruft die polizei an und der räuber ist verhaftet. Am ende Kevin's famile kommt zu hause und Kevin ist sehr glücklich.

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Appendix 10: Field note excerpts from phase II (Athens suburban school)

Field note excerpts from phase II

Visit 1: 5th February 2010 (10:00-14:00)

...During the last interview there is a group of students who have a free period and are using the corner PC, however, the internet connection is down. From where I'm sitting to conduct the interviews I cannot see or make sense of what they are doing. When the bell rings for a break, they leave after warning the teacher that they have changed the desktop image. We go to check it out, the teacher gives it a quick glance and tells me about the conflict that's going on where students constantly change the background photo. I look at it more carefully and I see it's a picture of a group of students and some teachers probably from a previous school trip. However, the students have tweaked the picture on Photoshop or a similar programme and they have drawn horns and crazy hair on some of the students and teachers. I warn Sofia and she returns from her desk to check it out. She seems a bit taken aback but at the same time she chuckles mumbling along the lines of 'what have they done now...?' She seems not to know how to change it so she leaves it like that looking a bit disturbed but she doesn't ask me to help either so I decide against offering to do it in fear of offending or undermining her position. After the break I continue with the next groups of students for the in-depth interviews.

Appendix 11: Field note excerpts from phase I (Athens suburban school)

Field note excerpts from phase I - Visit 1: 19 November 2009 (10:30-14:00)

11:00-11:40: Observation and informal chat with students as they use the TwinSpace to upload content.

The teacher has asked two boys and four girls to come and show me what they usually do on TwinSpace. It becomes quite clear why there are no group meetings to upload content on the forum as students gather around the computer in the cramped corner of the library and there is not even enough space for them to stand. Nikos tells me that he has used TwinSpace a couple of times at home whilst Giannis says he has logged in the platform two or three times from the library.

Eirini and Nadia from second grade try to log into TwinSpace whilst chatting to me about their experiences with computers. Nadia says she has no MSN or Facebook as she doesn't like chatting but she uses YouTube, downloads films and subtitles and accesses eTwinning from school and home. She calls herself a 'trekkie' and Eirini also claims to be a 'trekkie'. They tell me about the films they watch and their obsession with Star Trek. As we chat they both try to log into TwinSpace but there are problems. Eventually they are in and they explain to me how they have a folder on that computer where they store the project-related files, translate the content into English and then upload everything to TwinSpace.

The teacher has asked them to write a post about Odysseas Elytis, a Nobel-awarded Greek poet. They use Google to look up info and when they find everything they want on Wikipedia, they copy and paste it on a new forum post. They also have some other files in the computer's folder that they do not upload in the end. I ask them about the way they upload material by copying and pasting from Wikipedia or other internet sources. They are not concerned with copyright or acknowledging the source or checking if the information is correct. Their teacher does not seem concerned either as she does not supervise them at all but allows them to do whatever they want.

I ask them about what they like more on the platform and one of the girls tells me her favourite folder is the music one. She says they translate the lyrics with the use of the Google translator or themselves and upload them on TwinSpace.

I ask them if they do any 'original' work in groups or individually and Nadia says she has done some summaries a couple of times in the past but she hasn't taken part in any group activities. I ask her how they manage to upload videos from YouTube on the TwinSpace platform and she explains to me how to do it using the 'embed' function.

When the observation finishes they look for T-shirts on eBay.

The other two girls, Giota and Dafni, have only just started using TwinSpace as they are first graders and have very recently joined the project. The favourite activity is to post the lyrics or YouTube videos of their favourite songs and during the observation they upload one each. As I notice later on when I visit the forum they have uploaded them in the wrong folder under 'Poetry' and not the 'Music' one.

Aliki comes later to post the English translation of a Greek poem by Maria Polydouri. I ask her about the platform and she says she has not faced problems accessing TwinSpace but she finds the Internet connection very slow. She has used TwinSpace before from the library and home in order to upload photos, poems and she has left comments.

Now she is uploading the poem and she chats to me as she is typing. She has brought a printout of the English translation that she has found online. I ask her why she does not look for the translation online again but she says it was tricky to find it and she does not mind typing – she is a fast typist anyway. When she finishes typing the translation she logs out and leaves without checking out anything else.

After the second group focus interviews with B3 class the teachers asks one of the students (Stathis) to stay and edit a couple of posts with songs he has uploaded and add the YouTube video instead of the link he has provided. She asks Aliki to show him how to do it and I can hear them talking but as the other group has come for the interview I cannot observe what they are doing

Shortly before the bell rings and I leave, Katerina who is using the computer asks the teacher to help her with her English as she is chatting on Facebook to a boy from the Danish group. The teacher approaches her and helps her with the English, whilst the student also shows her picture of the boy on Facebook.

** During my first visit in November 2009 there was only one desktop PC available to students, however, when I visit them again three months later that has been replaced by two newer PCs.*

Field note excerpts from phase I

Reading club observation I (6 November 2009, 14:00-13:30)

During the meeting one girl is using the computer at the small, corner desk and although she is not greatly engaged in the discussion she does seem eager to reply to questions and get involved at some points. From what I can see she spends the whole time on Hotmail, MSN and Facebook. [...] As the meeting reaches its end the teacher asks the students for translations of their favourite poems in English to upload them to TwinSpace and a students complains saying 'Why, what have the Danish posted?'

Field note excerpts from phase I

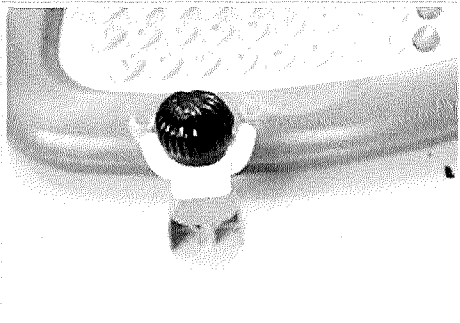
Reading club observation I (7 November, 16:30-18:00)

The students start arriving shortly after 16:00 often in pairs, however, the turnout is not great – there are seven girls and one boy, plus two more boys who leave early. Two girls sit at the computer desk in the corner of the room and spend some time uploading songs and lyrics on TwinSpace. Each student has his/her own username and password and can access the platform from school or home. One of the girls, Giota has used TwinSpace before from home to upload songs, lyrics and YouTube videos and the other girl wants to do the same so she tries to access TwinSpace. She is using an incorrect username and the teacher checks out and tells her the correct one from the list she keeps for all students. They two girls access TwinSpace together and upload some new songs from the film 'Moulin Rouge'. At some point Giota wants to access her Facebook account and when asking her she tells me she has not accessed it since the day before. Both girls have Facebook accounts. Giota tells me how she did something to the central Facebook server and she lost her Facebook account so she had to create a new one and start from scratch. I ask them about how the partner school responds to their posts and if they post a lot. They tell me that their partners do not post as frequently and lately they have almost 'disappeared'.

Appendix 12: Screenshot of blog created for students

my etwinning

19 JANUARY 2010



So what about etwinning? What do you feel about the project you are involved? What do you know about your partner school and the other students?

What about blogs, wikis, Myspace, YouTube or Facebook? What do you feel about all these and any other tools you may be using? Do you have a computer at home? How often do you go online? And what do you do when you go online?

I have all these questions to ask you and lots more, and I know how busy you always are at school and how little time I will have available to speak to you during the interviews and how difficult it's also for me to travel to all your partner countries and visit everyone.

So I thought perhaps you could spare me some time and tell me what your answers to all these questions are? You could just write down your thoughts in this blog, take a photograph or do a drawing, or a video, you could do this on your own or in pairs and groups with the other members of your etwinning team. If you don't feel like using this blog you can simply email me whatever you have created and I will post it here or not depending on what you ask me to do.

But before you try to post anything remember to email me (myetwinning@gmail.com) so that I can add you as authors of this blog and give you permissions to post. I hope I will see you around here!

Posted by Natasha G. at 20:33

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