Addressing the Digital Gap in Adult Literacy through the Blending of the Language Experience Strategy with Digital Storytelling

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A dissertation submitted to the University of Dublin, in partial fulfilment of the requirements for the degree of Master of Science in Technology & Learning

2013
Declaration

I declare that the work described in this dissertation is, except where otherwise stated, entirely my own work and has not been submitted as an exercise for a degree at this or any other university.

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Acknowledgements

I wish to thank all the students that participated in this study. To Sarah Lavan for believing in my project and to the E. and M. for their support and enthusiasm during the implementation.

Thank you to my supervisor, Tim Savage, for his advice, patience, guidance and knowledge.

A particularly big thank you to T. McGuinness for supporting me in everything I do and for reading almost everything I write. Most especially, thanks to:

Camilla, for proof reading it several times. I know, it must have been painful.
Abstract

Research shows a correlation between low literacy levels social exclusion and inequality. These issues have been exacerbated by the rapid change and development of new technologies which have had an impact on socio cultural practices thus affecting the types of literacy needed to be an included and functioning member of the Information Age Society. Currently, there is a lack of ICT designs in Adult Literacy to address these issues.

The central purpose of this research is to create and examine a framework that blends the established adult literacy Language Experience Strategy and Digital Storytelling.

Digital Storytelling has the capacity of addressing both traditional and digital literacy according to existing literature, but has not been explored in Adult Literacy in Ireland. It combines the construction of a personally meaningful narrative by the storyteller that involves reading and writing skills. This narrative is then enhanced by the use of still images, video and/or music but more importantly it uses the learner’s voice to tell the story.

The research question aims to explore the efficacy of this strategy and its suitability for the particular type of learner. Through the use of an exploratory case study and the various instruments employed to collect the data it appears that the Language Experience Strategy-Digital Storytelling approach enhanced the learning experience of the adult literacy learners. One of the strongest outcomes was an increase in confidence and empowerment in all participants.

Writing a personal story empowers the learner while using Information Age Technologies prompts in the learner a desire to get out of the digital divide.
# Table of Contents

Abstract .......................................................................................................................... v

Abbreviations ................................................................................................................ xi

1 Introduction ................................................................................................................. 1
  1.1 Background and Context ....................................................................................... 1
  1.2 Research Question ............................................................................................... 2
  1.3 Thesis Structure .................................................................................................... 3

2 Literature Review ...................................................................................................... 1
  2.1 Introduction .......................................................................................................... 1
  2.2 Digital Literacy ..................................................................................................... 1
  2.3 Literacy in the Information Age Society ............................................................... 1
  2.4 Approaches to Adult Literacy .............................................................................. 2
  2.5 Implications of Low Literacy in the Information Age ......................................... 2
  2.6 ICT Designs in Adult Literacy ............................................................................. 3
  2.7 Adult Literacy in Ireland ..................................................................................... 4
    2.7.1 Existing Pedagogical Principles and Strategies of Learning ....................... 5
    2.7.2 The Language Experience Strategy from a Social approach ..................... 6
  2.8 Digital Storytelling- Combining the Language Experience Strategy and Technology 7
    2.8.1 Digital Storytelling (DST) ........................................................................... 7
    2.8.2 DST and the Language Experience strategy .............................................. 9
    2.8.3 Digital Storytelling and reflection ............................................................... 9
    2.8.4 Digital Storytelling and digital literacy ..................................................... 10
  2.9 Conclusion .......................................................................................................... 10

3 Design Chapter ....................................................................................................... 12
  3.1 Introduction .......................................................................................................... 12
  3.2 The framework .................................................................................................... 12
  3.2.1 Phase 1 .......................................................................................................... 12
3.2.2 Phase 2 .................................................................................................................. 13

3.2.3 Phase 3 .................................................................................................................. 14

3.3 Designing criteria arising from the literature ....................................................... 15

3.3.1 Resources ............................................................................................................ 15

3.3.2 Phase 1- How to develop a strong story from the Language Experience strategy 15

3.3.3 Phase 2- Seeing and hearing the story ............................................................... 17

3.3.4 Phase 3. Assembling and sharing the story ....................................................... 18

3.4 Conclusion .............................................................................................................. 19

4 Research Methodology .......................................................................................... 20

4.1 Introduction ............................................................................................................ 20

4.2 Research Question ............................................................................................... 20

4.3 Research Strategy .................................................................................................. 20

4.3.1 Case Study ........................................................................................................ 20

4.3.2 Ethics ................................................................................................................ 21

4.4 Data Collection Instruments ............................................................................... 22

4.4.1 Observations ..................................................................................................... 22

4.4.2 Interview .......................................................................................................... 22

4.4.3 Artefacts ........................................................................................................... 23

4.5 Bias and Sensitive Research ................................................................................ 24

4.5.1 Sensitive educational research ..................................................................... 24

4.5.2 Bias .................................................................................................................. 24

4.6 Implementation ...................................................................................................... 25

4.6.1 Site selection .................................................................................................... 25

4.6.2 Participant selection ....................................................................................... 25

4.6.3 Session routine and classroom environment ................................................ 25

4.6.4 Conclusion ...................................................................................................... 26

5 Data Analysis .......................................................................................................... 27
Table 8-Phase 3........................................................................................................................................48
Table 9-Themes from Focus Group Interviews. Second iteration .........................................................49
Table 10-Themes from One-to-One Interview- Learners. Second iteration ........................................50
Table 11-Themes from One-to-One Interviews-Tutors. Second iteration ...........................................51
Table 12-Rubric- Artefacts ......................................................................................................................52
Appendix 4................................................................................................................................................53
Appendix 5................................................................................................................................................54
Appendix 6................................................................................................................................................68
Appendix 7................................................................................................................................................84

Table of Figures

Figure 1-Phase ...........................................................................................................................................13
Figure 2 Phase 2 .........................................................................................................................................14
Figure 3 Phase 3 .........................................................................................................................................15
Figure 4 DST Elements ............................................................................................................................19

Table 1-Time Breakdown ..........................................................................................................................28
Table 2-Generic Themes from Observations .............................................................................................28
Table 3-Final Themes ................................................................................................................................31
Table 4- Multiple Intelligences ..................................................................................................................44
Table 5-Phases ...........................................................................................................................................45
Table 6-Phase 1 ..........................................................................................................................................46
Table 7-Phase 2 ..........................................................................................................................................47
Table 8-Phase 3 ..........................................................................................................................................48
Table 9- Themes from Focus Group Interviews .........................................................................................49
Table 10- Themes from One-to-One Interview- Learners ........................................................................50
Table 11-Themes from One-to-One Interviews-Tutors .............................................................................51
Table 12- Rubric- Artefacts ........................................................................................................................52
## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
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<tbody>
<tr>
<td>ABE</td>
<td>Adult Basic Education</td>
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<td>AL</td>
<td>Adult Literacy</td>
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<td>ALTS</td>
<td>Adult Literacy Survey</td>
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<td>DST</td>
<td>Digital Storytelling</td>
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<tr>
<td>ICT</td>
<td>Information and Communication Technologies</td>
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<tr>
<td>MI</td>
<td>Multiple Intelligences</td>
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<td>NALA</td>
<td>National Adult Literacy Agency</td>
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<td>PIAAC</td>
<td>Programme for the International Assessment of Adult Competencies</td>
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1 Introduction

This chapter covers the background and context of the study, the research question and provides a road to the thesis.

1.1 Background and Context

Defining literacy is a complex task. There is a traditional concept of literacy which involves the ability of reading and writing (McCaffery, Merrifield, & Millican, 2007). Although reading and writing are also technologies (Sproat, 2010) literacy involves more than being able to read and to write (McCaffery et al., 2007; Mills, 2010; Muth, 2011).

Research shows a correlation between low literacy levels and social exclusion and inequality. These issues have been exacerbated by the rapid change and development of new technologies. They have had an impact on socio cultural practices thus affecting the types of literacy (Knobel & Lankshear, 2007) required to be an included and functioning member on the Information Age Society (NALA, 2011; Ofcom, 2012). Lack of digital literacy is increasing inequality between those who have the knowledge and those who have not (Hargittai & Hinnant, 2008).

Although there is no consensus on the definition of digital literacy (Robin, 2008), it could be described as the knowledge and ability to use and understand new technologies.

Research shows (Bynner, Reder, Parsons, & Strawn, 2010) that in general, adults who have returned to education have improved their life opportunities. Despite the efforts that Adult Literacy services are making to address literacy, their pedagogies are still focusing in a pre-Information Age Society notion of literacy that does not include knowledge of digital technologies in their practice (NALA, 2007).

The central purpose of this research is to create and explore a framework for the blending of the Language Experience strategy and Digital Storytelling. The Language Experience strategy is an established strategy in Ireland (McCaffery et al., 2007). It applies general learning principles used in Adult Literacy such as Multiple Intelligences (Gardner & Hatch, 1989), Scaffolding (Wood, Bruner, & Ross, 1976) and Reflection (Knowles, Holton III, & Swanson, 2005). It encourages learners to describe, write or talk about a previous personal experience, thus helping them to reflect on something that they already know. Through the use of their authentic forms of expression this strategy can be used to set the foundations of reading and writing (Mace, 1992).

The framework has three phases to complete and Adult Literacy principles are present in each phase. It considers Lambert’s seven steps as a guide (Lambert, 2010) to produce a digital story, blending Language Experience strategy and digital literacy in the process.
Phase one focuses on reading and writing strategies to scaffold traditional literacy as well as technological literacy e.g. keyboard and mouse skills, spelling, punctuations, sentence structure. In this phase a script is produced as a result of the Language Experience.

In phase two the script is recorded and it becomes the digital format of the written story. Reading, typing, visual and technical literacy (Sylvester & Greenidge, 2009) are the main objectives. Traditional and digital literacy are combined to obtain and create the necessary files for the assembling process of phase three.

In phase three all the compiled materials are assembled using a non-linear editing tool i.e. Window Movie Maker and multiple literacies are mixed again in the several processes involved, e.g. reading from the screen, typing text or using software (Rossiter & Garcia, 2010). This phase also involves sharing which is significantly important in terms of learners’ reflection and media literacy.

The framework was implemented over a period of 11 weeks with a total of 35 hours of field work with nine participants. The cohort of participants represented the typical characteristics of adult literacy learners. Most learners did not have previous computer knowledge and their general goals were to acquire reading and writing skills. A strict code of conduct and best practice, to preserve confidentiality, was observed throughout the duration of the project.

The methodology chosen was an exploratory case study. Data was collected from observations, focus group and one-to-one interviews and from the analysis of artefacts. There were emergent themes from the process of scaffolding and reflection as well as from the variety of teaching and learning strategies adopted during the different phases. This data was analysed to help answer the research question and sub-questions set out below.

1.2 Research Question

The study intends to answer the following question:

Did the Language Experience strategy-Digital Storytelling approach enhance the learning experience of the adult literacy learners?

The answer to this question is obtained from the following sub-questions:

- Was the Language Experience Strategy-Digital Storytelling approach an effective way to address Adult Literacy goals?
- Did the Language Experience Strategy-Digital Storytelling approach meet the aims of Information and Communication Technologies literacy?
• How appropriate was the strategy bearing in mind the specific characteristics of Adult Literacy learners?

1.3 Thesis Structure

The overall structure of the study takes the form of six chapters, including this introductory chapter.

Chapter two presents the theoretical dimensions of the research and looks at how literacies of the Information Age Society have changed. It describes different approaches and strategies applied to Adult Literacy (AL) in Ireland such as the Language experience strategy. It explores the relationship between low literacy and the digital divide and examines current ICT designs to address this issue. Finally it evaluates digital storytelling as a strategy to blend traditional literacy and Information Age Society technologies to address multiple literacies.

Chapter three focuses on the design of the framework created to blend the Language Experience Strategy and Digital Storytelling. It presents an overall three phase framework with this integration in mind. This is followed by a more detailed explanation of each phase demonstrating how the literature has informed the design and the practical exercises for the learner and the tutor to complete.

Chapter four is concerned with the methodology used for this study. It first proposes the research question focusing on a discussion of the appropriate research strategy and on the tools employed to collect data during the implementation. An exploratory case study was chosen. It seems to be appropriate because of the scale of the study and the lack of a previous framework based on the characteristics of the learners.

Chapter five analyses the processes of data collection and analyses the results of the data obtained from different instruments. Codes and themes are used to categorise and conceptualise the information. It further describes the implementation of the framework.

Finally chapter six begins by answering the research sub questions in conjunction with the reviewed literature and provides a discussion of why the Language Experience Strategy-Digital Storytelling approach enhanced the learning experience of the adult literacy learners. Following this there is an outline of the unexpected findings and limitations of the study. Finally it concludes and recommends future research within the area of Adult Literacy.
2 Literature Review

2.1 Introduction

This chapter presents the theoretical dimensions of the research and looks at how literacies of the Information Age Society have changed. It describes different approaches and strategies applied to Adult Literacy (AL) in Ireland. It explores the relationship between low literacy and the digital divide and examines current Information and Communication designs to address this issue. Finally it evaluates Digital Storytelling as a strategy to blend traditional literacy and Information Age Society technologies to address multiple literacies.

2.2 Digital Literacy

The Information Age Society has brought about new literacies, e.g. Digital literacy. Because of the new terminology there is not yet consensus on its definition (Robin, 2008) but a full discussion lies beyond the scope of this study. The breakdown by Sylvester and Greenidge (2009) is used to define digital literacy:

- Technological literacy or the ability to operate computers efficiently.
- Media literacy or the ability to send, retrieve, compose and evaluate text, manipulate images and sound and an awareness of media agendas.
- Information literacy or the ability to be critical of the information found on the Internet which involves a different set of reading skills if compared to reading skills used in conventional texts.
- Visual literacy or the ability to interpret symbols. This literacy has evolved from interpreting cave drawings to interpret symbols used in software.

2.3 Literacy in the Information Age Society

The impact of digital technologies in our daily activities has changed the traditional concept of literacy. Since the late nineties research has been focusing on the impact of technology in society and how this has changed the traditional understanding of literacy. Mills (2010) research into the New Literacy Studies (NLS) reviews how the definition of literacy has contributed to the definition of social literacy practises and considers the “complex context-related uses of literacy in which different societies use reading and writing”. Multiple literacies must be addressed when developing literacy strategies (McCaffery et al., 2007, p. 73) whether they are for children, younger or older adults.
2.4 Approaches to Adult Literacy

There are four conceptual models by which AL can be approached (McCaffery et al., 2007). The competency approach or the skills to read and write acquired mainly in schooling years; the functional approach where literacy is seen as the ability to apply reading and writing in essential tasks important for life and employment; the social practices approach which sees literacy as a combination of social and cultural elements connected by the written word; and finally, the radical approach where literacy is seen as a tool for critical reflection and action for social change. Muth (2011) divided these four approaches under two stances. The Cognitive approach is the umbrella for competency and functional skills while Social –Humanistic approach represents the social and critical models.

Different approaches may be used depending on national policies and educational systems at any given time. In general, and especially in the western world, government policies addressing literacy problems are more concerned with cognitive approaches which generally are focused on skill acquisition to be applied in life and employment. Muth (2011, p. 27) argues that AL learning is more than “instrumental skill acquisition” or the acquisition of functional skills.

Street (1984) as cited in Muth (2011) argued that when models of instruction are dominated by economic and political needs, they tend to teach standardised sets of skills and knowledge that often use de-contextualised methods. These approaches do not take into consideration that multiple literacies on the Information Age Society are shaping social and cultural structures and are an integral part of them (McCaffery et al., 2007; Muth, 2011). The focus is on the curriculum not on individual learning experiences which are the focus of AL learning (Muth, 2011).

Therefore combinations of social-humanistic and cognitive approaches to literacy seem to be more beneficial to the flourishing of individuals than those only focused on acquiring cognitive skills.

2.5 Implications of Low Literacy in the Information Age

There seems to be a correlation between low literacy levels and low income affecting people’s life chances and increasing inequality. Longitudinal research and recent surveys (Ofcom, 2012; Reder & Bynner, 2009; Strawn, 2008) show that in the Information Age Society this knowledge gap has deepened creating more inequality between those who have the knowledge and those who have not (Deursen & Dijk, 2009; Hargittai & Hinnant, 2008; Mills, 2010). Access to technologies, as believed in the early years of the Internet (Gorard & Selwyn, 1999; Hargittai & Hinnant, 2008), does not seem
to be the problem but rather the knowledge and ability to access and manipulate information and communication technologies.

As technologies evolve rapidly the need for research to advance the provision of AL in the Information Age Society is becoming urgent. It is not just the case of adults lacking competency and functional skills but adults that did not have a chance to learn digital literacy in their schooling years as well.

In a report for the Organisation for Economic Co-operation and Development Ginsburg, Sabatini, and Wagner (2000, p. 79) highlighted, the vast opportunities that Information and Communication Technologies (ICT) offered to adult populations with low literacy, mainly because they are less tied to formal curriculums. Poynton (2005, p. 868) suggested that computer literacy and traditional literacy are equally important when combined empowering learners to participate in the context in which they live.

Concurrently, Livingstone, Van Couvering, and Thumim (2005) argue that research on interaction and digital content creation has been focused mainly on layers of society that are already advantaged recommending the evaluation of other initiatives.

In Ireland, the National Adult Literacy Agency (NALA) claims the need for including critical thinking skills in all adult learning programmes to address new media literacy issues created by knowledge gaps. They stated that short sighted policies are prioritising economic agendas rather than societal needs such as literacy, probably increasing further social exclusion (NALA, 2011).

2.6 ICT Designs in Adult Literacy

The advent of new tools requires adaptations of existing successful strategies and learning designs that recognise literacy in the Information Age Society. Generally in Ireland, computer literacy is not included in the teaching of traditional literacies such as reading and writing.

New tools, such as the personal computer, are used to repeat traditional literacy practices according to Knobel and Lankshear (2007); for example, learning how to use an editing tool to type with the computer instead of the typewriter is not adding anything new to literacy practices. This is also the case of traditional methods of teaching and learning computer literacy that are “limited because they only pay attention to operational skills, the so called ‘button knowledge’” (Deursen & Dijk, 2009, p. 334).

Recent studies on effective ways of using ICT with adults with low literacy concluded that learners can acquire a greater number of basic skills when using ICT making their study time more valuable (Mellar et al., 2007). Some of the ICT designs included technologies
such as e-Portfolio, Tablets, m-learning, digital video, mind maps, online games in family learning, web quests, voting technology or social networking. Tutors were practitioner-researchers and they had different learning objectives in their designs, e.g. numeracy instead of language.

From their conclusions some guiding principles emerged such as collaboration, autonomy, variety and artefacts (Nance, Kambouri, & Mellar, 2007). They recommend more flexibility in classroom management to foster and promote collaboration e.g. joint tasks. Autonomy and self-directed learning was emphasised, where learners should perceive the tutor role as a facilitator and supporter rather than an expert. They also recommended using a variety of alternative technologies rather than the personal computer that only seems to engage some adult learners. They suggested activities that involve the construction of artefacts because these allow for experimentation, having very positive outcomes such as motivation, collaboration and clearer goals (Nance et al., 2007).

It could be argued that these designs were focused on functional skills where literacy is focused on reading and writing for life and employment (McCaffery et al., 2007) rather than on individual learning that allows for personal growth (Muth, 2011). However, the combination of teaching and learning strategies from social and functional approaches to literacy appears to be beneficial to the value of learner’s study time.

2.7 Adult Literacy in Ireland

The publication of the International Adult Literacy Survey (IALS) report in 1998 (OECD & Canada, 2000) showed that there were one in four adults under Level 3 of the IALS description of literacy levels and domains, in Ireland (see Appendix 1 for a more details).

Following 1998’s report AL provision was organised to correct the situation. ‘Adult basic education’ relates to AL and numeracy work, educational and vocational training courses at basic or foundation level in different contexts. These services are provided by Vocational Education Committees and at local level led by the Adult Literacy Organisers providing a range of learning options including one-to-one tuition, group tuition, family literacy and English for Speakers of Other Languages. Volunteer tutors mainly provide one-to-one tuition while group tuition is provided by part-time paid tutors. Most of the Adult Basic Education services provide a minimum of two hours tuition per week although there are other learning opportunities available (McCaffery, Mace, & O’Hagan, 2009).

AL tuition does not follow a particular curriculum. Their aim is to help the learner to gain confidence so that they can bridge the gaps in knowledge.
2.7.1 Existing Pedagogical Principles and Strategies of Learning

Despite a large range of strategies being used in Ireland the following are general principles that are widely adopted.

2.7.1.1 Multiple Intelligences (MI) from a Cognitive approach

Multiple intelligences theory is a descriptive learner-centred theory that recognises different strengths and abilities in every individual, hence recommending variety on teaching and learning strategies and assessments methods.

MI theory, introduced by Howard Gardner in 1983 suggests that verbal-linguistic and logical-mathematical intelligence, have dominated in traditional schooling (Gardner & Hatch, 1989) arguing that while this is important, intelligence should not be measured only by these two types of symbolic systems. Gardner described eight differentiated forms of intelligences that can be improved in the course of life (Appendix 2). He recommends (Gardner, 2005) to use this theory as a learner centred approach to recognise different learner’s strengths. Gouws (2007) suggest that it can help educators to explore different teaching strategies.

AL learners generally lack confidence in their abilities (McCaffery et al., 2009, p. 20). Seeing learning as a holistic process that involves emotional and cognitive skills means to recognise learner’s previous experiences enabling then to strengthen confidence and to perceive literacy and numeracy differently (McCaffery et al., 2009).

2.7.1.2 Scaffolding from a Social Constructivist approach

Scaffolding is a metaphor used to describe the first steps in a process that is meant to help learners to understand new knowledge. Scaffolding “enables a child or a novice to solve a problem, carry out a task or achieve a goal which would be beyond his unassisted efforts” (Wood et al., 1976, p. 90); by scaffolding a learning process, the teacher is creating the structure in which to build new knowledge (Bruner, 1983).

Yelland and Masters (2007) observed that this is a dynamic process that needs to be modified according to the zone of development of the learner. Beed and Hawkins (1991) identified three key characteristics in the process. First, contact should happen in a collaborative context “with the learner’s own intentions being the aim of the process” (Yelland & Masters, 2007, p. 3). Second, the learning task needs to be within the development zone of the learner. A third characteristic is that the support is gently ceased as the learner becomes more independent (Yelland & Masters, 2007).

In Ireland, the AL tutor and learner agree an initial learning plan based on learner’s goals. The tutor must be aware of what is the next step in the learning process to
stimulate challenge without creating anxiety (McCaffery et al., 2007). Scaffolding for reading and writing, in many occasions, begins by encouraging learners to write some personal experience using their own words. This is called the Language Experience Strategy (McCaffery et al., 2007) and it is examined below.

2.7.1.3 Critical reflection on experience from a Humanistic approach

Learning from experience requires the learner to think about knowledge they already possess and how could this help them to move forward in a learning process of which they are aware.

Dewey’s concepts on teaching adults encouraged learning from experience (Knowles et al., 2005; McCaffery et al., 2007; Rogers, 2002). The experiential learning theory lies within the humanist view and uses a spiral to explain that learners’ present experience originates the learning need or motivates the search for information to solve current issues.

This principle has been adapted to other learning theories (Rogers, 2002). For example, Kolb defined learning as “the process whereby knowledge is created through transformation of experience” Kolb (1984 p.38) as cited in Knowles et al. (2005, p. 197). Kolb’s (1984) experiential learning cycle, is used in Ireland in relation to AL strategies and proposes the following phases according to McCaffery et al. (2007, p. 156):

- Starting with an experience. For example, language experience stories, reading and discussing texts in groups or using literacy and numeracy in a group activity.
- Observing and reflecting on the experience. Outside classroom experiences can spring the process of active learning and reflection.
- Making generalisations. The group can discuss experiences in a safe environment sharing ideas, discussing mistakes and learning from each other.
- Putting ideas into practice in new situations. Learners can change their self-perception and their perception of the world thus experiencing a transformation.

2.7.2 The Language Experience Strategy from a Social approach

This strategy amalgamates the principles mentioned above by encouraging learners to describe, write or talk about a previous personal experience, thus helping them to reflect on something that they already know. Through the use of their authentic forms of expression this strategy can be used to set the foundations of reading and writing.

The Language Experience strategy was initially used in the UK as a mechanism to bridge a gap between existing text books and materials more relevant to learner’s daily
activities. The stories related to the learner’s social context and generated the reading and writing materials (McCaffery et al., 2007) from which spelling, sentence structure, punctuation, phonics or new vocabulary among other skills were introduced e.g. cloze or fill the gap.

If a learner cannot write, the tutor can transcribe the learner’s speech. The aim is to relate familiar words used in speech with its linguistic symbols as a first scaffolding step. Mace (1992) states that, authorship is the main principle in adult literacy education. With this strategy learners are the authors of their own learning materials increasing confidence and strengthening traditional literacy. It is an established strategy in Ireland (McCaffery et al., 2007).

2.8 Digital Storytelling- Combining the Language Experience Strategy and Technology

So far the literature has examined the different approaches to Adult Literacy, the importance of being digitally literate in the Information Age Society and how some ICT designs in AL could double the value of study by acquiring two different set of skills at the same time.

The principles underpinning the social approach in Ireland recognises learners’ previous experience as resources to scaffold reading and writing skills. The narrative that emerges from the Language Experience strategy has the potential to be aligned with a technology enhanced strategy called Digital Storytelling by constructing a personal artefact. In the process of the construction, the gap between traditional literacy approaches and Information Age literacy practices can be bridged (Robin, 2008).

2.8.1 Digital Storytelling (DST)

In recent years, there has been an increasing interest in the combination of narrative and multimedia technologies (Rossiter & Garcia, 2010). This fusion is called Digital Storytelling. While a variety of definitions have been suggested, this dissertation will use the definition used by Robin (2008) and Rossiter and Garcia (2010) as the combination of the art of telling stories with a variety of multimedia objects, such as images, audio, and video that can be played on a computer, TV set or uploaded on a web site. For the purpose of this paper Digital Storytelling is hereafter referred to as DST.

From an educational point of view digital stories can be classified as: personal narratives, stories that examine historical events and stories that are primarily used to inform or instruct (Robin, 2008).
The origins of DST reach back to the 1980s. In the 1990s the Center for Digital Storytelling was founded (Lambert & Mullen, 2007). Their work has its roots in community arts and oral history and according to Meadows (2003, p. 191) “it stretches from pre-literacy cultural traditions”. Meadows (BBC, 2008) comments that “anyone can make a Digital Story because everyone has an story to tell.” His model of DST focuses on constructing stories for online publishing. His pragmatic principles are: a strong story, transferral of skills and ownership (BBC, 2008).

Lambert (2010) describes the production of a digital story as a journey and proposes seven steps to be considered in its construction. These steps are:

1. Owning your insights. Participants reflect about the story they are going to tell and why.
2. Owning your emotions. Participants reflect on the emotions that are triggered by the story and why.
3. Finding the moment. Reflecting about the moment of change within the story e.g. before and after the event.
4. Seeing your story. Participants think about what visuals are going to illustrate the story.
5. Hearing your story. Participants telling the stories are recorded. Considerations to include soundtrack can be explored.
6. Assembling your story. The visuals and the recorded voice and additional soundtracks are combined to give the story a coherent structure.
7. Sharing your story. Participants share the story online or just with particular audiences.

Any instance of DST (Rossiter & Garcia, 2010, p. 38) “recognizes, honours, and encourages the narrative meaning-making process as central to learning.”. A considerable amount of literature have been published in various areas including K–12 education, higher education, health care, aging, community action as an approach to address digital literacy (Rossiter & Garcia, 2010). It allows learners to combine traditional and new literacies giving them “voice, confidence and structure in their writing” (Sylvester & Greenidge, 2009, p. 284).

A study of “Educational Uses of Digital Storytelling Around the World” (Yuksel, Robin, & McNeil, 2011) shows how DST is perceived by educators as useful in all teaching areas, but also improving technology and visual literacy, mental health, social sciences and secondary languages. Other benefits are: reflection, language, social, artistic and higher level thinking skills. Participants commented that DST can be used “particularly where
personal reflection is involved”. A drawback perceived by some is that it is very time consuming and difficult to measure.

Although research of DST in adult education is scarce (Rossiter & Garcia, 2010) grassroots organizations and researchers, in general, highlight the beneficial aspects of underpowered populations being heard through these digital stories. They can be a rich source for qualitative data in adult education studies (ibid).

2.8.2 DST and the Language Experience strategy

In order to produce a digital story a script is needed. The script can originate from a personal experience, a story that learners want to tell or to write about.

Research on storytelling and narrative is extensive. According to Bruner (2002) stories can aid us to link experiences. Butcher (2006) investigated storytelling as a teaching strategy with adults with low literacy in a prison environment. She summarises the benefits as follows: storytelling validates the learner’s experience, can change a learner point of view, enhance learner’s verbal and interpersonal communication, expose learners to different worlds and invokes emotion, makes learning fun and it improves knowledge of self and others.

Using learners’ experience to write a script for a digital story is an adaptation of the Language Experience strategy where meaningful and authentic materials originate. When the Language Experience Strategy takes the form of a story to be shared, it can engage learners to reflect.

2.8.3 Digital Storytelling and reflection

Reflection is practiced in every AL session in Ireland using different strategies. Its aim is to increase learners’ confidence by bringing an awareness of their previous knowledge helping them to recognise, share and celebrate achievements.

Lambert’s first three steps of the production are concerned with self-awareness and reflection, common elements in any life story. The personal narrative that develops using the Language Experience Strategy follows these initial steps becoming a central part in the construction of the artefact. It allows learners to use the story as reading and writing material to improve traditional literacy throughout the process but also allows tutors to encourage reflection. Lambert’s last step is about sharing the stories providing another opportunity to reflect and exchange opinions on experiences.
2.8.4 Digital Storytelling and digital literacy

DST can scaffold traditional and digital literacy by combining two types of narratives (Rossiter & Garcia, 2010). The story becomes the voice over or aural narrative once it becomes digitalised. The visual narrative is formed by compiling a series of images to illustrate the story (Rossiter & Garcia, 2010). The development of the personal narrative from the Language Experience enhances traditional literacy while the digital composition of the visual narrative enhances digital literacy. The combination addresses multiple literacies (Robin, 2008; Yuksel et al., 2011).

DST combines computer practices in a socially situated context that is meaningful to the learner. While technological literacy is the ability to operate computers efficiently its aim is to develop the skills of computer literacy that would help to adapt to evolving technology (Strawn, 2008). This definition ignores the “situated character of computer practices that intersect with literacy and involve meaning embedded in context” (Strawn, 2008, p. 1). In DST learners observe, participate, and create an artefact based on their unique personal narrative gaining knowledge of computer literacy while collaborating in multiple processes e.g. typing, printing, scanning, voice recording, downloading, and assembling digital materials.

In DST a correspondence between voice and images must exist to create a coherent combination of aural and visual narratives. Visual literacy is the ability to interpret symbols and to communicate through visual images (Robin, 2008). Visual literacy also involves the interpretation of software symbols used across computer applications and devices, e.g. browsers, mobile phones, digital cameras, video player devices, editing tools (Sylvester & Greenidge, 2009). Assembling the different digital elements gives the learners the opportunity to become aware of and interpret different software symbols.

There are also components of media literacy as they are collaborating in processes that require the manipulation of sounds and images. Learners need to be aware of the consequences of copyright issues as well as distributing or publishing materials on the Internet.

Information literacy is not the concern of the study due to the characteristics of the learners.

2.9 Conclusion

This literature has reviewed some of the strategies and principles underpinning Adult Literacy in Ireland. In order to reduce the digital gap there is a need to adapt some of the existing strategies to the Information Age Society.
For many learners even if the schooling years were not a bad experience they may have not had the opportunity to learn computer literacy. DST can open up opportunities, for both teacher and learner while addressing multiple literacies. At the same time the study time can be doubled by acquiring two set of skills.

The inclusion of ICT designs in the teaching and planning of AL strategies is urgent, especially in the western world where opportunities to function in society are directly related to the knowledge the Information Age Society has brought about. The inequality gap between those who have the knowledge and those who have not will keep growing. The integration of ICT designs with other forms of traditional literacy could enable individuals to actively participate in the context in which they live (Poynton, 2005) without separating traditional and new literacies.

The combination of the Language Experience strategy with DST is only an example of a well established and successful AL strategy combined with technologies of the Information Age Society. Its aim is to integrate computer literacy in a social context where learners can initiate a learning path towards digital literacy. It is an opportunity for the learners to demonstrate other interests, motivations and faculties as the process of constructing their artefact progresses. This can help the tutor to explore and review other teaching strategies (Gouws, 2007) centred on the learner and focused on promoting reflection and diversity.

Involving tutors in the role of researchers-practitioners seems to be a strategy that works well in ICT designs. As Rogers (2002, p. 102) states “Each learning is unique just as each learner is unique”.

The next chapter will cover in detail the design principles of the blending of Language Experience strategy and DST.
3 Design Chapter

3.1 Introduction

The central purpose of this research is to create and explore a framework to blend the Language Experience strategy and Digital Storytelling. The Language Experience strategy is an established approach in AL and DST has the capacity of addressing both traditional and digital literacy. The chapter presents an overall three phase framework with this integration in mind followed by a more detailed explanation of each section demonstrating how the literature has informed the design and the practical exercises for the learner and the tutor to complete.

3.2 The framework

The framework has three phases to complete. It considers Lambert’s seven steps as a guide (Lambert, 2010) to produce an artefact blending the Language Experience strategy and digital literacy in the process.

For a detailed overview see Appendix 3, Table 5.

3.2.1 Phase 1

It begins with the scaffolding process involved in the Language Experience strategy and the scaffolding of computer literacy. This fits very strongly with the first three steps of Lambert’s model from where a strong story develops. A variety of scaffolding exercises can be done depending on learners’ ability from which, alphabet, spelling, sentence structure, punctuation, phonics or new vocabulary among others can be introduced e.g. cloze or fill the gap. Relating familiar words used in speech with its linguistic symbols is a first scaffolding step. Digital literacy is nurtured, through the use of mouse and keyboard. While developing the story the learners are encouraged to reflect on the audience, the structure of the story and the experience itself. Depending on the story this can be an emotive moment.

Figures 1, 2 and 3 show the blending of the different elements of the three phases respectively.
3.2.2 Phase 2

This processes fits directly into Lambert’s fourth and fifth step where technology, visual and media literacy are at the core. Processes from the Language Experience strategy and DST are both present with two main goals: recording learner’s voice and compiling the visuals to illustrate the story. From the Language Experience strategy all the grammatical corrections should be in place. The hand written story is shared with the group, thus practising reading skills. This sharing can also support the process of reflection. Scaffolding keyboard and mouse skills runs concurrently with the activities so that they can type their own texts.

In each of the processes the learner must observe and collaborate in what is happening. The story could have developed from looking at existing still images from the learner’s archives. If this is the case the scanner is the tool to use. If the learner is telling a story where images are not available there can be two options: one to take images with a digital camera or two, download images from the Internet. Once they have voice and images files learners can start experimenting with a non-linear editing tool.
3.2.3 Phase 3

Lambert’s sixth and seventh steps are followed. The Language Experience strategy has been moved to a higher level by the requirements of the illustration which feeds into the assembling process using Windows Movie Maker. Learners practice reading and writing with screen text. In this stage learners concentrate on combining their voice with the images they would have compiled. This time can be used to reflect on learners new vocabulary brought about by computer terminology. At the end they can share and reflect on their learning experiences.
In the following section a more detailed explanation of the three elements and how they interrelate with each other in the design of this framework is presented.

3.3 Designing criteria arising from the literature

3.3.1 Resources

These are resources used to produce a digital story: a script, still images, a non-linear editing tool, i.e. Windows Movie Maker (WMM), recording software, i.e. Audacity, microphone, digital cameras, scanner, printer, headphone sets, splitting audio connector, storyboard and interactive videos from BBC Webwise website.

3.3.2 Phase 1- How to develop a strong story from the Language Experience strategy

This phase has two goals following the first three steps of Lambert's model: to generate and capture the ideas for the story and to scaffold keyboard and mouse skills. The story develops from the Language Experience strategy and it is used to scaffold reading and writing skills.
Lambert’s guidelines are concerned with self-awareness and reflection, common elements in any life story (Lambert & Gong, 2010). Recognition and encouragement of the narrative meaning-making process is central to learning (Rossiter & Garcia, 2010) giving learners voice and confidence. It also allows learners to think of an audience and to structure writing therefore combining traditional and new literacies (Sylvester & Greenidge, 2009). Script writing helps the participant to construct their unique materials hence becoming authors (Mace, 1992). In this phase the learner’s experience is validated, improving knowledge of self. It allows for verbal and interpersonal communication by invoking emotion (Butcher, 2006).

Examples of DSs are needed to give some perspective of the concept of DST e.g. from the Capture Wales website (BBC, 2008). To originate ideas participants are encouraged to look into existing images that may bring memories of past experiences (ibid). To give some perspective, a demonstration of narrative length (100 printed words) and time (1 minute reading time per 100 words) with beginning, middle and end should be shown. Numeracy could be relevant for some of the learners so developing exercises including time and length could be another skill to act upon. Awareness of target audience and structure are introduced.

Initial ideas for the story should be discussed privately (Marshall & Rossman, 2011), if possible, as well as to encourage writing without grammar concerns. Spellings, punctuation, sentence structure, paragraph structure, phonics, for example, can be revised according to learner’s skill preparing scaffolding materials accordingly. Tutors can observe gaps in skills and confidence allowing them to choose between the best practice resources.

In order to scaffold technological and visual literacy the learner needs to develop mouse, keyboard skills and awareness of software symbols. Interactive videos from the BBC Webwise are chosen for this study. It allows for independent learning but computer anxiety must be avoided, thus it needs to be well supervised. Technological literacy (Sylvester & Greenidge, 2009) aims to develop the skills of computer literacy but it should involve meaning embedded in context (Strawn, 2008).

In this phase DST intersects the meaning of learning mouse and keyboard skill with the ability to type and print the narrative for reading purposes thus contextualising traditional and digital scaffolding.

For a detailed overview see Appendix 3, Table 6.
3.3.3 Phase 2- Seeing and hearing the story.

This phase has several goals: typing, reading and recording the script, and compiling the visuals. The first two goals are concerned with traditional and digital literacy scaffolding. They feed into Lambert’s fourth and fifth step where the multimedia elements of the digital story are created (Lambert, 2010).

Participants need to be encouraged and helped to type and print the script. The keyboard provides the opportunity to identify capitals letters’ shapes and to explain the QWERTY logic as most learners would expect to find the letters in alphabetical order. The hand written stories are converted into a digital printed form for reading purposes. The printing process has a meaning and it happens in an authentic context.

Reading the script to an audio recorder creates the digital version of the printed word. This is the most important goals of this phase. It combines traditional and digital literacy. According to Lambert (2010, p. 18) the recorded voice of the storyteller telling their story is “what makes what we call a “digital story” a digital story—not a music video or narrated slideshow” making the stories very powerful. It captures the unique character of the storyteller.

A new technological concept arises in this process in the form of an audio file. This is a project milestone and exposes most learners for the first time to hearing their own voices invoking different emotions.

“When we hear our voices coming from outside ourselves we have a moment of seeing ourselves as someone other than our Self. In that moment we can experience the kind of empathy and compassion for ourselves that we would feel for another person who might be telling the story. [...]This is an empowering experience of affirmation, which can stimulate deep learning and insight.” (Rossiter & Garcia, 2010, pp. 33-34)

Allocating a quiet room to make the recordings is paramount to allow for privacy due to the characteristics of the learner and to avoid undesirable background noises and interruptions for best recording quality. Participants may need to record their reading or telling several times so that they can have a sense of “ownership” (BBC, 2008).

Collaboration between learner and facilitator should allow the learner to decide about his or her best performance, even though they are not doing the editing.

For Meadows this part of the production is called “transferral of skills” referring to the person who knows the production tools to the person who does not. Meadows (BBC, 2008, p. 33) mention how empowering this can be for people that are digitally excluded.
“a perfect tool to prompt the desire to get out of the ‘digital divide’”. It may change their self perception or their perception of the world (McCaffery et al., 2007; Rogers, 2002).

The last goal is to compile images e.g. taking pictures. Scanning, acquiring images from digital cameras or downloading pictures from the Internet are processes that must be observed by the learner, and if possible, explained individually. The files obtained should be saved directly on to personally named pen drives. Storing of materials for later retrieval makes the saving process contextual and meaningful and is a key component on technological literacy. Information highlighting technical issues of handling external storage devices is also necessary. Media literacy awareness regarding image ownership, copyright and confidentiality issues should be mentioned avoiding back ups in the local computer.

When assembling, ideally, a storyboard should be used. It helps to visualise on paper the stacking order of the different digital elements (Appendix 4).

Having obtained the audio and image files participants should be introduced to the assembling process where a non-linear editing tool, in this case Windows Movie Maker, is used to import and stack files. New technical words appear in context e.g. “importing”, “audio”, "file", “video transitions” and “effects”. At this time visual and technological skills are transferred and combined by allowing learners to experiment or play (Nance et al., 2007) with the different software features while practicing their mouse and keyboard skills as well as reading from the screen. For a detailed overview see Appendix 3, Table 7.

3.3.4 Phase 3. Assembling and sharing the story

This phase has two goals that are directly related with Lambert’s model: assembling the voice and the images and sharing the finished artefact with the class. Traditional literacy moves to a higher level by reading from the screen, learning new terminology, typing credits or titles and reflecting on their learning while writing the learner’s report.

Finalising the assembling of the voice and images allows learners to experiment on their own and to enjoy this moment with the assistance from tutors or more capable peers (Vygotsky, 1978; Wood et al., 1976). This is where all the scaffolding in traditional and digital skills converge allowing learners to understand the process even though they may not be doing the physical editing. Noticing and avoiding any sign of computer anxiety is paramount.

Lambert states that this is a moment to think about the structure with the audience in mind. For AL learners this should be the class and family but ultimately themselves.
Structure has to be suggested and negotiated in collaboration with the participants so the order of their images has to fit the structure of story as they understand. The structure is marked by the beginning, middle and end of the story, as discussed in the first phase.

For Meadows (BBC, 2008) this is about ownership and transferral of skills. Suggestions should be made but must be negotiated e.g. additional pieces of text. However, for simplicity’s sake is not recommend to over use text. Using the tools and skills to combine multiple literacies should have a higher priority in this learning process than learning how to apply multimedia and video/film production principles. This study does not considered this learning appropriate due to the characteristics of the learners.

The final step is to publish the project file into a format that is portable for computer and home consumption and to showcase the digital story to the class. Sharing can be emotional for all viewers but especially empowering and enjoyable for the participants. Participants should be given their digital stories in a DVD so they can be shared with family and friends. For a detailed overview see Appendix 3, Table 8.

3.4 Conclusion

This chapter was set out to describe the design implications emerging from the literature. It examined the different phases and the goals of each in the construction of the artefact. It also covered in detail the use of different pedagogical principles employed in the Language Experience –DST strategy as well as the practical exercises for the learner and the tutor to complete. It explained how multiliteracies were combined and how digital literacy was contextualised. The next chapter will describe the research design and the implementation details of the study.

![Figure 4 DST Elements](image-url)
4 Research Methodology

4.1 Introduction
Chapter four details the overall research design used in the study. It first proposes the research question focusing on a discussion of the appropriate research strategy and the tools employed to collect data during the implementation.

4.2 Research Question
The study intends to answer the following question:

Did the Language Experience Strategy-DST approach enhance the learning experience of the adult literacy learners?

The answer to this question is obtained from the following sub-questions:

- Was the Language Experience Strategy-DST approach an effective way to address AL goals?
- Did the Language Experience Strategy-DST approach meet the aims of ICT literacy?
- How appropriate was the strategy bearing in mind the specific characteristics of the learners?

4.3 Research Strategy
The central purpose of this research is to explore whether a blend of the Language Experience Strategy with a DST process addresses multiple literacies in the Information Age Society. It follows a qualitative approach.

In order to answer the research question it posited an exploratory case study strategy for depth of understanding of a real life context (Yin, 2009). A variety of qualitative methods where adapted to suit the particular requirements and circumstances of the situation (Denscombe, 2003).

4.3.1 Case Study
A case study approach is considered to comply with the three main purposes of qualitative research: describing, understanding and explaining (Cohen, Manion, & Morrison, 2011). It does not generalise statistical findings as the quantitative methods do.

In contrast with other research methods e.g. experiments, a case study does not try to manipulate particular circumstances to have particular outcomes or to establish cause and effect (Denscombe, 2003; Yin, 2012).
It is an exploratory case study as at the time of the study the author was not aware of an existing framework designed for AL learners. How and why questions can help to understand a social phenomenon happening in its natural form (Yin, 2012) and the findings may help to move from a case study design to an action research design where personal attempts are made to understand, improve and reform practice (Hopkins, 1985 as cite in Cohen et al. (2011)).

Action research can be defined as “a small-scale intervention in the functioning of the real world and a close examination of the effects of such an intervention” (Cohen et al., 2011, p. 345). Hence, the research questions are formulated as a result of the intervention and the activity that took place (Cohen et al., 2011) rather than leading the intervention.

Although this study does not follow an action research approach, it could enhance either the design of the framework and/or the research methodology employed to add validity and reliability to the results. The sampling is of a typical group of adult learners attending an AL programme (Cohen et al., 2011).

4.3.2 Ethics

4.3.2.1 Ethics approval

Ethics approval was sought from Trinity College Dublin and granted for this study by the School of Computer and Statistics Ethics Committee. See Appendix 5 for relevant documents.

Due to confidentiality issues the study started with a preliminary phase consisting of 14 hours aiming to familiarise the learners with the researcher participant previous to the collection of data. In order not to disrupt their normal activities the researcher reassured learners of their freedom to not participate in the workshop if they felt that their learning goals were not addressed. The Ethics written consent could have put pressure on them if given in the first contact. The researcher used this time to examine available resources for the learning intervention and to become familiar with participant’s routine trying to build relationships. Learners consent was given after four weeks of teaching contact.

The author’s first language is not English and this was a concern for the in-service tutors initially as well.
4.4 Data Collection Instruments

4.4.1 Observations

The researcher acted as a participant observer according to Cohen’s definition (Cohen et al., 2011). This means that the researcher is not a member of the group and her role is known by the group. She participates in all the activities as unobtrusively as possible observing in situ evidence of their social routine in the classroom. This type of observation has unstructured and semi-structured characteristics. First, what took place in their routine must be identified so that the agenda of the implementation can be established (Denscombe, 2003). Therefore data gathered had to be reviewed before the next session took place (Cohen et al., 2011).

It allows for rich descriptions and it helps to raise questions for further investigation. It looked for facts such as participation in the activity, the amount of spontaneous peer teaching in addition to programme setting such as resources available and the physical environment. In order to reduce reactivity effects the researcher dedicated a period of time to build trust and relationships with the participants aiming for an holistic observation (Denscombe, 2003). Notes of field experience were taken in the form of a diary of reflections and were written some time after the observations had been made (Cohen et al., 2011).

Typical bias (Cohen et al., 2011) from this instrument can be in the form of:

- selective memory (Denscombe, 2003) as the writing took place after the event,
- expectancy effects as the observer knows about findings from similar studies and this may have influenced the observations,
- validity of constructs such as what counts as valid evidence for a judgement,
- reactivity as the participants may have changed their behaviour if they knew they were observed.

4.4.2 Interview

4.4.2.1 Semi-structured interview

The intention of the interview was threelfold: to collect learner perceptions experience in terms of their meeting their literacy goals, to understand their opinions on learning by using technology in their daily activities, and to explore the changing of goals as a result of the experience. Participants’ consent to participate and to be able to withdraw at any
time is fundamental to comply with research ethics. It also needs to guarantee confidentiality, anonymity and non-traceability (Cohen et al., 2011).

This data set allows for an interchange of views between two or more people, it looks at the centre of “human interaction for knowledge production, and emphasizes the social context of the research data” (Cohen et al., 2011, p. 349). This collection instrument was considered appropriate for the study because it takes into consideration emotions, experiences and feelings that needed to be explored (Denscombe, 2003). It also has a sensitive element arising from personal experiences that needed to be carefully handled. Some generic guidelines for minority and marginalised groups were taken into consideration as suggested by Cohen et al. (2011). A semi-structured set of pre-determined and open questions was chosen to allow for some latitude (Freebody, 2003) and flexibility as regards of participant’s ways of expression. It gave the interviewee an opportunity to have a ‘voice’ making them feel safe, secure and supported allowing for this communicative encounter (Cohen et al., 2011) to be successful when communication could have been an issue.

A questionnaire was not suitable due to the reading and writing restrictions of the learner and the demographic questions were included in the structured part of the interview, e.g. age. These interviews were transcribed and then hand coded. For an example see Appendix 6.

4.4.2.2 Focus group interview

The purpose of this instrument was to supply a topic to be discussed obtaining a collective rather than individual view (Morgan 1988:9 as cited in Cohen et al. (2011)). Participants interacted with each other and the views and opinions that surfaced offered and opportunity to collect emerging data (Cohen et al., 2011) that may have not been available in a one-to-one interview (Denscombe, 2003). It is useful when non-sensitive and non-controversial topics need to be explored empowering participants to speak out using their words (Cohen et al., 2011, p. 436).

Emergent themes from this instrument were analysed to prepare the semi-structure interview questions (Cohen et al., 2011). It was difficult to record as speakers interrupted each other and spoke simultaneously (Denscombe, 2003).

4.4.3 Artefacts

The artefacts produced were collected as evidence of the digital stories made by participants. There are ethical issues in the area of life histories, narrative enquiry and DST (Marshall & Rossman, 2011). It is recommended to be collaborative in the
construction of the history or narrative avoiding to disclose information that may pose a threat for the participant (Marshall & Rossman, 2011). DST represents different ethical issues because the storyteller is producing the story. However, unauthorized uploading of highly personal digital stories to the Internet remains a challenge especially with young adults (Marshall & Rossman, 2011, p. 155).

4.5 Bias and Sensitive Research

4.5.1 Sensitive educational research

The production of a digital story in the form of a personal narrative plus the confidentiality clause by which Adult Literacy abides has positioned this research within the constraints of sensitive educational research (Cohen et al., 2011, p. 165). Cohen recommends looking at the conditions under which sensitivity arises within the research project instead of creating a list of sensitive topics. Therefore in this study sensitivity could have derived from: intrusion into private, deep personal experiences or risk or threat of stigmatisation and fear of scrutiny and exposure (Cohen et al., 2011).

Telling a personal story can be anecdotal and humorous but also can be about a deep personal experience. In many cases people attending AL classes feel or felt stigmatised and very often have poor self-esteem due to their lack of academic achievement. By asking participants to write about a personal experience some may not realise about consequences deriving from making public to the class private matters. It was the responsibility of the researcher to provide guidance in these matters as Marshall and Rossman (2011) suggest.

4.5.2 Bias

There is a problem of bias with this type of research design as it relies on the interpretation of the researcher (Cohen et al., 2011).

Due to the need to build initially strong relationships with the learner the researcher questions the veracity and therefore the validity of some of the answers given in the interview were participants may have felt that it was important to help the researcher in the study. Therefore, there is a need to design a type of questionnaire that could eliminate this doubt to a certain extent. Furthermore the questionnaire should suit participants reading and writing skills.

Although a case study, the participation of the researcher alters the circumstances of a normal routine by using different strategies and could probably have a particular effect in
the results should the learning experience have been conducted by the in-service tutors under normal circumstances.

4.6 Implementation

4.6.1 Site selection

The site chosen for this study was the Gorey Learning Centre in Gorey, Co. Wexford. Permission was sought and approved from both the Ethics Committee in the School of Computer Science and by VEC Wexford Board of Management. The participants gave informed consent. Confidentiality and ethics was strictly observed at all times.

4.6.2 Participant selection

Participants were selected by the Adult Literacy Organiser after consultation with in-service tutors. The group consisted of nine adult learners aged 25-60. Two of them were poor attendees. The normal teacher-student ratio is of 1:6 therefore this group had two in-service tutors. Class duration is three hours during the morning on a weekly basis. Some of the participants also attend one-to-one sessions at other times. Their goals are discussed with the tutor to create an individual learning plan which is strictly confidential. Goals are reviewed overtime and changed according to new ones. The researcher did not have previous access to individual learning plans.

4.6.3 Session routine and classroom environment

Learning activities are divided into two sessions. The first session lasts one hour and 15 minutes and it is followed by a tea break. Tutors believe that concentration levels are higher when doing cognitive work therefore learners work independently on their individual goals and homework.

The tea break lasts approximately 30 minutes and the group, including tutors, join together as a social act to develop relationships.

The second session involves group work and it lasts one hour. The layout of the classroom consists of an oval table where tutors and learners sit together. Dictionaries and other stationary materials and resources are placed on the centre of the table to be shared.

In the last 15 minutes the learners fill in a report reflecting on what has been learned.

There were a total of 9 sessions dating from 11th October to 13th December 2012 were 35 hours of field work were carried out. A preliminary phase of 14 hours was dedicated to build relationships as noted in the Ethics section of this paper.
4.6.4 Conclusion

This chapter was concerned with the methodology used in this study. The next chapter presents an analysis and discussion of the findings.
5 Data Analysis

5.1 Introduction

Chapter five describes the processes of data collection and analyses the results of the data obtained from different sources. It further describes the implementation of the framework.

5.2 Process of Data Analysis

The research strategy follows a qualitative approach therefore the process to analyse the data is qualitative. Although this seems obvious it means that it entails an ongoing process throughout the study. According to Cohen et al. (2011) there is not a particular correct way of analysing and presenting the data, the rule is that it should fit the purpose of the research.

In the process the data is segmented and then put back together again in order to answer the research question. This requires the researcher to interpret the data and it is subject to bias (Boeije, 2010).

The interpretative analysis of this study is oriented towards the themes and categories that emerged from the data in a tabular fashion. The data presented in the tables are codes. This open code technique makes possible to identify similar information (Cohen et al., 2011). In order to code the themes a numeric value was placed on the side of the interview transcripts. It facilitated the identification of questions and answers due to the fact that there were not always asked in the same order or using the same words (Appendix 6). It allowed for categorisation in order to consolidate concepts from the data as shown in Table 3 below.

Several sources of data were used in the analysis. Data was analysed as soon as it was collected. The data discussed in this section comes from themes that emerged from 35 hours of field work, approximately four hours of interviews with tutors and learners, including focus group interviews and eight sets of learners’ artefacts over a period of 11 weeks. The recordings were made using a smart phone. Table 1 below shows a breakdown of the data collected over time.
Table 1-Time Breakdown

<table>
<thead>
<tr>
<th></th>
<th>Oct 11th -Nov-8th</th>
<th>Nov-15th- Nov 22nd</th>
<th>Nov 29th- Dec 13th</th>
<th>Jan-17th</th>
<th>Jan-31st</th>
<th>Tot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weeks</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>11w</td>
</tr>
<tr>
<td>Observations/Field Work</td>
<td>14h</td>
<td>7h</td>
<td>14h</td>
<td></td>
<td></td>
<td>35h</td>
</tr>
<tr>
<td>Focus Group Interview</td>
<td>26</td>
<td>17</td>
<td></td>
<td></td>
<td>43m</td>
<td></td>
</tr>
<tr>
<td>Interviews with tutors</td>
<td>20</td>
<td>20</td>
<td></td>
<td></td>
<td>40m</td>
<td></td>
</tr>
<tr>
<td>Interviews with learners</td>
<td>9</td>
<td>19</td>
<td>25</td>
<td>20</td>
<td>18</td>
<td>n/a</td>
</tr>
<tr>
<td>Number of Artefacts</td>
<td>8</td>
<td>1.48</td>
<td>1.4</td>
<td>0.5</td>
<td>1.16</td>
<td>1.43</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>1.43</td>
<td>1.05</td>
<td>1.26</td>
</tr>
</tbody>
</table>

5.2.1  Validity and reliability- Triangulation

The intention of all the measurements is to gain introspection into the learner's perception of learning with technology while still achieving their reading and writing goals. Triangulation is a strategy used in qualitative research to add validity and reliability to the process of data collection by avoiding systematic biases or limitations of specific instruments (Maxwell, 2005).

5.2.2  Observation process

Data collected during the observation period helped to identify the themes shown in Table 2 which informed the questions for the focus group interviews. This data was taken in a diary of field notes with reflections and observations where all the events of the day were registered. See Appendix 7 for more details.

Table 2-Generic Themes from Observations

<table>
<thead>
<tr>
<th>Themes from Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Willingness to participate</td>
</tr>
<tr>
<td>Willingness to learn about computersQuestions</td>
</tr>
<tr>
<td>Computer anxiety</td>
</tr>
<tr>
<td>Feelings of achievement</td>
</tr>
<tr>
<td>Confidence increased</td>
</tr>
<tr>
<td>Concentration</td>
</tr>
<tr>
<td>Relaxing atmosphere</td>
</tr>
<tr>
<td>Laughter</td>
</tr>
<tr>
<td>Resources</td>
</tr>
<tr>
<td>Group bonding</td>
</tr>
<tr>
<td>Collaboration</td>
</tr>
<tr>
<td>Spontaneous peer teaching</td>
</tr>
<tr>
<td>Sharing</td>
</tr>
</tbody>
</table>

5.2.3  Focus group interview process

Two focus group interviews were conducted. The first one took place before they shared their stories with the class. The second was carried out after they shared the stories with the class and family. The topic of discussion brought to the table was to reflect on the
learning experience and their feelings about sharing. The emergent themes were coded under four categories as shown in Appendix 3, Table 9. These themes helped to articulate the interview questions.

From the first interview it was interesting to find out that some people in the group had been offered a place on a basic computer course. This triggered a discussion about their readiness to accept the offering. They felt that although empowered by the experience it was more important to consolidate reading and writing skills before they could join any course not related with AL due to a lack of confidence.

As a result they proposed to the tutors to do more project work and practice on the computer while attending AL classes. They suggested including the computer in the literacy sessions for two reasons. First it may take the stigma out of the reading and writing difficulties they have, explaining that not being computer literate is more socially accepted. Second it doubles the value of their study time. A desire to repeat the experience was expressed by all participants.

In the second interview they expressed being proud and more confident as a result of sharing with their families. Self perception had changed for some. Younger family members had offered help with the computer at home after seeing their stories, others wanted to show the story to everybody.

Other comments referred to the confidentiality agreement as a motivator to express deep personal experiences in front of a small and private audience; perhaps not being so open to do so if they were going to be showcased or published to a wider audience e.g. the Internet.

5.2.4 Semi-Structured Interviews process

The interviews include tutors and learners and most of the themes that emerged from the focus group interviews were investigated. The questions were under these themes: time spent learning/goals achieved, type of strategy, further goals, confidentiality as a motivator.

5.2.4.1 Learners

Themes arising from these interviews are shown in Appendix 3, Table 10.

Time spent learning/goals achieved- Learners felt that their literacy goals were achieved in the process. The reflection exercise in the focus group interview shows their interest in learning more using project or group work strategies. They also felt that more time spend in this type of project presents more learning opportunities especially in terms
of computer literacy. So according to them, computer literacy should be included in their weekly activities.

Further goals- As a direct result of the learning experience a learner had joined already a computer class already.

Another outcome is that they felt more confident to further their learning but lacked confidence to learn outside the AL environment. They were empowered to claim more time at the computer in the AL sessions to be able to join other courses and thus doubling the value of the study time-until they feel more secure with their reading and writing issues.

Type of strategy- The strategy seems to have addressed all AL goals. Scaffolding of reading and writing and digital literacy simultaneously appears to be a satisfactory strategy to use bearing in mind the characteristics of the learner. They all showed a strong desire to repeat the experience.

Confidentiality as a motivator Only one learner would definitely not have participated if the story was going to be published on the Internet. In relation to their confidentiality clause and media awareness it was not very clear to them the possible repercussions if their stories were being published online.

5.2.4.2 Tutors

Themes arising from these interviews are shown in Appendix 3 Table 11.

Time spent/Learning goal achieved- Both tutors considered that the project achieved the goals of adult literacy in several grounds.

First and most important it empowered the learners. It prompted the desire to bridge the digital gap by dedicating more time with tasks that involve the use of digital technologies (Meadows, 2003; Robin, 2008; Rossiter & Garcia, 2010; Sylvester & Greenidge, 2009; Yuksel et al., 2011). The context in which digital technologies were scaffold helped the learner to overcome computer fear faster than with traditional computer literacy courses.

Second, it offered opportunities to reflect through the writing and sharing of their stories. It promoted learner centred activities which in general appeal to the majority of AL learners. Writing the story using the Language Experience strategy accomplished the traditional literacy goals of reading and writing (Butcher, 2006; Mace, 1992; McCaffery et al., 2007).

Type of Strategy- They highly recommend the experience because it probably achieved more learning in less time than using traditional strategies alone. They noted that group
bonding and dynamics improved after sharing their stories for the first time in Phase two. Help and support from each other increased. They have some reservations about preparation time and how to fit it within their sessions.

Further goals- As a result they would like some training to be able to repeat the project. Further analysis was necessary to conceptualise the codes that helped to answer the research question. Some of the key findings are presented in the discussion section of next chapter.

Table 3-Final Themes

<table>
<thead>
<tr>
<th>Themes</th>
<th>Value of study time</th>
<th>Enjoyment</th>
<th>Feelings about sharing</th>
<th>Collaboration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empowerment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confidence/lack of confidence</td>
<td>Project work</td>
<td>Pride</td>
<td>Confidentiality as a motivator</td>
<td>Peer teaching</td>
</tr>
</tbody>
</table>

5.2.5 Artefacts

This instrument shows evidence of participant’s age and technologies used as well as general goals set out in the design to see how they align with the framework, for more details see Appendix 3, Table 12. Out of nine participants, seven stories were completed. There was a case were only the audio file was presented. As the researcher was leading the activities, she was present throughout the process taking observation notes.

5.2.6 The Creation Process

The creation process involved a total of 9 weeks and 35 hours of teaching contact, see Table 1 above for more details. It was divided in three phases with different objectives set out by the design of the framework. Following is a description of the events that took place.

5.2.6.1 Phase One- 4 Weeks-14 hours

The concept of DST was explained and examples were shown. Ideas were given to spark stories e.g. looking for visuals in their private archives. From this moment learners met outside the class with the researcher to allow for confidentiality and to build relationships. By the end of the third week most learners had ideas and stories to write and were working on the grammatical knowledge gaps. Scaffolding was mainly done by the in-service tutors as part of their normal routine.
Digital literacy scaffolding began in the second half of their session and included at least 45 minutes of mouse and keyboard exercises using the BBC Webwise resource. Learners were enthusiastic about the computer. Concentration and anxiety were observed thus supervision was carefully provided. Most learners were able to follow the instructions - that included reading from the screen and recognising symbols – without much assistance.

In their reflection sheet new vocabulary such as the word “digital”, as well as words they had to learn for their stories, were recorded.

5.2.6.2 Phase Two- 2 Weeks- 7 hours

In these sessions the scripts were typed and printed. Class management strategies were agreed with the tutors regarding sitting arrangements and computer allocation. This facilitated peer teaching from learners that had more experience with the process of typing and printing.

The scanning process was shown to participants who had brought still images while others were observing the process of acquiring images from digital cameras. Some participants were involved in both. At this time they were informed about some media literacy concerns about image ownership, copyright issues and confidentiality. Due to confidentiality issues back ups of their files were not made. Information highlighting technical issues of handling pen drives was given.

Recordings took around 15 to 20 minutes allowing participants to hear themselves and choose the best recording. Once the audio file was obtained participants were introduced to WMM by the researcher.

It was decided not to use storyboard template as a resource due to time constraints. Materials were assembled directly on WMM. Soundtrack and still images were imported to begin the assembly process. Signs of excitement and concentration were observed as they saw the process of video production taking place.

5.2.6.3 Phase Three- 3 Weeks- 14 hours

This phase has to aims: assembling and sharing.

Assembling- structure as well as additional pieces of text were suggested and negotiated in collaboration with the participants so the combination of visual and aural narratives was coherent.

Sharing- the digital stories was showcased in the class. Participants were enthusiastic about watching each other’s stories but more importantly they were so proud of watching
their own. The power of their voices made this moment very emotive for all present. Participants were given their digital stories on a DVD so they could share them with their family and friends.

5.3 Summary
This chapter has presented the process of data analysis and the findings from different data sources in order to answer the research question. It also describes the implementation process. The next chapter discusses the findings by answering the research question and sub questions.
6 Conclusion and Discussion

6.1 Introduction

The previous chapter discussed the method of analysing the collected data and presented some of the key findings. This chapter begins by answering the research sub questions in conjunction with the reviewed literature and provides a discussion about the main research question. Following this, there is an outline of the unexpected findings and limitations of the study. Finally, it concludes and recommends future research within the area of Adult Literacy.

6.1.1 Research question

The study intended to answer the following question:

Did the Language Experience strategy-Digital Storytelling approach enhance the learning experience of the adult literacy learners?

The answer to this question has been obtained from the following sub-questions and it is answered in the discussion section.

6.1.2 Was the Language Experience Strategy-DST approach an effective way to address AL goals?

Based on the opinions of both learners and tutors, this approach was very successful in achieving Adult Literacy goals. The outstanding result was learners' empowerment (McCaffery et al., 2009) which is a difficult goal to achieve. It surpassed the study's initial expectations which were mainly focused on digital technology awareness.

Learners agreed that their goals had not only been met but also they had other goals such as learning using digital technologies. Some had plans to buy a computer; others had joined further computer training, while others would prefer to have more access to digital technologies while still attending the literacy sessions.

Mouse and keyboard skills scaffolding (Wood et al., 1976) opened a path to new knowledge. The experiential learning cycle began by the new experience according to Dewey's concepts (Knowles et al., 2005; McCaffery et al., 2007; Rogers, 2002). This in turn offered an opportunity for learners to reflect on what their capabilities were, provided they have support (Vygotsky, 1978).

Through this reflection they made generalisations e.g. how much could they accomplish if more time was dedicated to learn computer skills. This created a new situation. This realisation or learning transformation empowered them to discuss and set out different
goals as a group for activities they would like to do in the class. They realised that by working in a project more learning was accomplished within the same time frame making their study time more valuable.

From the beginning digital literacy was in itself a challenge and a motivator. A challenge because of their feelings about lacking knowledge, ability and confidence. A motivator because they knew, that this is a literacy of the Information Age Society. It is considered as important as to be able to read or write.

Before they began writing their stories they saw examples of what was expected of them by the end of the project. Their personal narrative (Robin, 2008) developed naturally almost without effort using the well established Language Experience strategy (McCaffery et al., 2007). In fact some participants wrote two stories. This particular group was highly motivated in addressing their reading and writing skills. Many thought that creating a video would be impossible to accomplish considering their lack of computer skills, not to mention their reading and writing issues. They did not have confidence in themselves but trusted the knowledge and assistance provided by the tutors to be guided through the process.

Tutors also recognised that there was probably more learning happening through the project than would have been accomplished under normal circumstances (Robin, 2008). Since this type of informal learning is not tied to a curriculum there is no formal assessment in place to be able to measure the learning gained. Tutors judgement of learners’ improvement is often based on observing learner’s confidence.

Q- What do you think it was the most important aspect of the activity for the learners?

“[..] it was so much from beginning to end, it is very difficult to narrow it down [...] one of the main things about this group of learners is confidence [...] some of them are now walking with their chests project out, and delighted with themselves….It’s not that easy to cause that, and this project has done that [...]”

6.1.3 Did the Language Experience Strategy-DST approach meet the aims of ICT literacy?

Yes, the desire to get out of the digital divide was reflected by their new goals on how to direct their own learning.

The digital literacy goal set out for the project included an awareness of technological, visual and media literacy (Sylvester & Greenidge, 2009). It is true that there were not
enough mechanisms in place to measure this e.g. pre and post questionnaires, but this was a natural constraint bearing in mind the learner difficulties with the written language and the informal style of teaching not tied to curriculums and assessment. However the artefacts present a clear evidence of learners’ interaction with digital technologies (See Appendix 3 Table 12).

From their reflections learners proposed to use the computer more while in the literacy sessions thus helping them to gain confidence while still in the literacy sessions. They believe that they need more reading and writing skills to join a computer course because they still feel fear to be embarrassed and stigmatise. The position in this paper is that this matter is related to self-efficacy issues although this discussion is beyond the scope of this study (Bandura, 1986, 1997; Bandura, Barbaranelli, Caprara, & Pastorelli, 1996).

Tutors commented about high levels of concentration when working with the interactive videos and the rapid development of mouse dexterity and basic visual literacy.

*Had the learners asked for more computer tuition?*

_A_- Yeah, I think everyone of them would like to do more computers, [...] it would be our intention not to just use it to teach them the computer [...]_

Media literacy awareness was brought about by the class confidentiality agreement so that publishing and sharing the stories with a wider audience was not an option. Concerns about research involving DST in educational settings, and with young adults in particular, are issues that arise from the possibility of unauthorised uploading to the Internet of highly personal stories (Marshall & Rossman, 2011).

A theme that emerged from the focus group interview was that confidentiality was a motivator to share personal stories. The fact that the stories were shared in intimacy helped them to be more open.

In another light, sharing the stories in the classroom and with families and friends was an experience that made learners to feel proud of themselves. It was the accomplishment as well as their sharing something very personal. How they perceive others and how they are perceived as a result. Lambert suggest that is the voice which makes these digital stories very powerful for the storyteller and the audience (Lambert, 2010).

### 6.1.4 How appropriate was the strategy bearing in mind the specific characteristics of the AL learners?

The position on this study is that it was not only appropriate but successful considering the characteristics of the learner. According to tutors’ opinions and based on their
previous experience with some of the learners they felt the same based on the positive changes they observed on most learners and the group dynamics.

First, it responds to the goals of AL, it not only addresses reading and writing but brings to the fore the personalities of the learners. Through the Language Experience they become authors which according to Mace (1992) is one of the main principles in adult literacy education. They can express themselves and be heard, they recognise the language that they are using to write and to read because it comes from their speech. It is meaningful and authentic and it allows them to learn new vocabulary, and work on their grammar issues.

Second, it introduces new knowledge by the innovative combination of the art of telling stories with a variety of multimedia objects (Robin, 2008; Rossiter & Garcia, 2010). Everybody has a story to tell (Bruner, 2002; Meadows, 2003) and talking about experiences appeals to adult literacy learners. It also seems to be beneficial (Butcher, 2006) in terms of self confidence. With scaffolding and assistance (Vygotsky, 1978; Wood et al., 1976) every novice can learn new knowledge. Learners felt that their initial goals were still met even if their normal routine was altered. They realised that in order to use the computer they did not need to wait until their reading and writing skills improved further. Their knowledge of reading and writing was already sufficient to be able to follow verbal guidance from the Webwise interactive videos, and not by the tutors. They were well able to use a computer given the right instructions, guidance and support (Vygotsky, 1978).

They have seen that learning keyboard and mouse skills involved a similar learning process than when they first joined the literacy service: understanding and practice. As motivated and experienced adults they realised that there is more in adult literacy than reading and writing using pen and paper only, and that access to other technologies is also as important for them because it offers a new set of opportunities that in turn helps with their reading and their writing.

Reflection is done in their sessions so they can apply knowledge to new situations. This realisation had empowered them to talk openly about other strategies that involved using more ICT in their learning sessions while consolidating their reading and writing skills.

The Language Experience strategy –DST approach combines two approaches to literacy. First, the social approach, where literacy is seen as a combination of social and cultural elements connected by the written word (McCaffery et al., 2007). Second, the humanistic approach where learning experiences and reflection offer learners the opportunity to think critically (Muth, 2011) . From the Social approach the ICT design
combined multiple literacies and skills brought about by the Information Age society. From the humanistic approach learners told their personal stories by reflecting and negotiating with the tutors other ways of learning besides the pen and paper.

6.1.5 Discussion

The author strongly believed in the success of this strategy as a method to address multiple literacies but specifically as a path to exit the digital divide (Meadows, 2003). The data obtained to answer the main research question suggests that the Language Experience Strategy-DST approach enhanced the learning experience of the adult literacy learners.

The aims of AL are to empower learners by helping them to achieve certain standards that are set by them and not by the curriculums. This informal model allows for the blending of successful existing strategies such as the Language Experience strategy and new ones that include technology, such as DST. The literacy goals were not only achieved but surpassed as expressed by tutors. Tutors want to learn more about the framework in order to replicate it with other groups and learners would like to repeat the experience.

Tutors became aware of other strategies to introduce computer literacy while still achieving the proposed learner goals without any additional budgetary cost.

Learners became aware of other possibilities brought about by Information Age Society technologies besides the consumption of Internet websites. Collaboration on the production of their digital story gave them a sense of ownership that translated into empowerment. In addition, the reflection exercises gave them a ‘voice’ to express thoughts about other learning strategies used such as project work.

If the success of the intervention were to be assessed by what was observed on the day the stories were showcased, then the conclusion would be a positive and holistic learning outcome. It was the end of a journey (Lambert, 2010) where the help provided to enhance traditional literacy with Information Age Society tools inspired confidence, a sense of achievement and empowerment in all participants.

6.1.6 Limitations of the study

The researcher was not familiar with each individual's learning goals. Despite the fact that relationships were built at the beginning of phase one, the intrusion on their private lives was not considered appropriate at the time. Normally, these learning goals are only released with learners consent. Therefore, the researcher can only support what was
observed and needed some corroboration by the tutors. Ideally action research by the tutors would bring a deeper knowledge.

Tutor training and preparation time may be a constraint for the implementation of this strategy in all instances. If the study were conducted again, prior tutor training would be organised so they could get familiar with the design principles of the framework.

Although the experience took place over several weeks, it would have been more desirable to allow the learner more time using the editing tools.

The study generated a large amount of qualitative data. Due to the fact that the researcher is a novice, the presentation, the interpretations and conclusions from the data could be enhanced for a better understanding of the case studied.

Concerns about research involving DST in educational settings and with young adults in particular are issues that arise from the possibility of unauthorised uploading to the Internet of personal stories (Marshall & Rossman, 2011).

6.1.7 Unexpected findings

It was not a part of the study to observe group dynamics or project based activities but this theme emerged from the focus group interviews. The project helped the group dynamic by creating a bonding that became noticeable when they shared the stories for the first time in phase two.

Spontaneous peer teaching as well as peer teaching encouraged through class management happened (Nance et al., 2007; Rossiter & Garcia, 2010; Sylvester & Greenidge, 2009). Learners expressed their enjoyment of working with the group rather than on their own.

6.1.8 Future research

Longitudinal research could be conducted to learn further from the learners’ experiences and the implications of strategies such as the one proposed in the study over time. However, it would be unlikely that government policies and research attention would focus in a minority group in the present financial situation (Cohen et al., 2011).

In general, blending Information Age Society tools with existing AL strategies should have more dedicated time and attention through the use of action research giving learners the opportunity to have a voice.
References


Appendix 1
IALS domains and levels of literacy (McCaffery et al., 2007, p. 51).

Three Domains of Literacy Skills

- **Prose literacy** – the knowledge and skills needed to understand and use information from texts including editorials, news stories, brochures and instruction manuals.
- **Document literacy** – the knowledge and skills required to locate and use information contained in various formats, including job applications, payroll forms, transportation schedules, maps, tables and charts.
- **Quantitative literacy** – the knowledge and skills required to apply arithmetic operations, either alone or sequentially, to numbers embedded in printed materials, such as balancing a chequebook, figuring out a tip, completing an order form or determining the amount of interest on a loan from an advertisement.

Levels of Literacy

- **Level 1** indicates persons with very poor skills, where the individual may, for example, be unable to determine the correct amount of medicine to give a child from information printed on the package.
- **Level 2** respondents can deal only with material that is simple, clearly laid out, and in which the tasks involved are not too complex. It denotes a weak level of skill, but more hidden than Level 1. It identifies people who can read, but test poorly. They may have developed coping skills to manage everyday literacy demands, but their low level of proficiency makes it difficult for them to face novel demands, such as learning new job skills.
- **Level 3** is considered a suitable minimum for coping with the demands of everyday life and work in a complex, advanced society. It denotes roughly the skill level required for successful secondary school completion and college entry. Like higher levels, it requires the ability to integrate several sources of information and solve more complex problems.
- **Levels 4 and 5** describe respondents who demonstrate command of higher-order information processing skills.
Appendix 2

Gardner defined intelligence “as the capacity to solve problems or to fashion products that are valued in one or more cultural settings.” (Gardner & Hatch, 1989, pp. 5,6).

Table 4- Multiple Intelligences

<table>
<thead>
<tr>
<th>Intelligence</th>
<th>End-States</th>
<th>Core Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logical-mathematical</td>
<td>Scientist Mathematician</td>
<td>Sensitivity to, and capacity to discern, logical or numerical patterns; ability to handle long chains of reasoning</td>
</tr>
<tr>
<td>Linguistic</td>
<td>Poet Journalist</td>
<td>Sensitivity to the sounds, rhythms, and meanings of words; sensitivity to the different functions of language</td>
</tr>
<tr>
<td>Musical</td>
<td>Composer Violinist</td>
<td>Abilities to produce and appreciate rhythm, pitch, and timbre; appreciation of the forms of musical expressiveness.</td>
</tr>
<tr>
<td>Spatial</td>
<td>Navigator Sculptor</td>
<td>Capacities to perceive the visual-spatial world accurately and to perform transformations on one’s initial perceptions.</td>
</tr>
<tr>
<td>Bodily-kinesthetic</td>
<td>Dancer Athlete</td>
<td>Abilities to control one’s body movements and to handle objects skilfully.</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>Therapist Salesman</td>
<td>Capacities to discern and respond appropriately to the moods, temperaments, motivations, and desires of other people.</td>
</tr>
<tr>
<td>Intrapersonal</td>
<td>Person with detailed accurate self-knowledge</td>
<td>Access to one’s own feelings and the ability, to discriminate among them and draw upon them to guide behaviour; knowledge of one’s own strengths, weaknesses, desires, and intelligences.</td>
</tr>
</tbody>
</table>
## Appendix 3

### Table 5-Phases

<table>
<thead>
<tr>
<th>PHASES</th>
<th>LANGUAGE EXPERIENCE ACTIVITIES</th>
<th>LAMBERT’S STEPS</th>
<th>DIGITAL LITERACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>Developing a strong story, reflection on the story, the structure and the audience, Recognition of words, Alphabet, Spelling, Phonics, Cloze sheets, Fill the gap sheets, Matching, True/False</td>
<td>1. Owning your story &lt;br&gt; 2. Owning your emotions &lt;br&gt; 3. Finding the moment</td>
<td>Technological:&lt;br&gt;-Developing mouse and keyboard skills &lt;br&gt;Visual:&lt;br&gt;-Software symbols &lt;br&gt;Media:&lt;br&gt;-Awareness of target audience</td>
</tr>
<tr>
<td>Two</td>
<td>Typing the final story, Reading and sharing the story with the group, Reflection on stories, new vocabulary, Reflection on structure of the story, Recognition of capital shapes and familiarities with QWERTY keyboard, Recording while reading</td>
<td>4. Hearing your story: reading or telling the story into a recorder &lt;br&gt;5. Seeing your story: Compiling images to illustrate the story</td>
<td>Technological literacy:&lt;br&gt;-Typing and printing the story &lt;br&gt;-Voice recording &lt;br&gt;-Scanning, capturing or downloading images &lt;br&gt;Visual Literacy:&lt;br&gt;-Software symbols &lt;br&gt;Media:&lt;br&gt;-Copyright &lt;br&gt;-Confidentiality; sharing</td>
</tr>
<tr>
<td>Three</td>
<td>Illustrating the story with still images, Group discussion, Reflecting on other's people stories, Reflecting on learning</td>
<td>6. Assembling your story &lt;br&gt;7. Sharing your story</td>
<td>Technological literacy:&lt;br&gt;-Assembling voice and visuals using a non-linear editing tool &lt;br&gt;Visual Literacy:&lt;br&gt;-Software symbols &lt;br&gt;-Coherence; images combined with voice.</td>
</tr>
<tr>
<td>PHASE 1</td>
<td>KEY FOCUS</td>
<td>TEACHER STRATEGIES</td>
<td>LEARNER ACTIVITIES</td>
</tr>
<tr>
<td>---------</td>
<td>-----------</td>
<td>--------------------</td>
<td>--------------------</td>
</tr>
</tbody>
</table>
| A Strong Story | - Self awareness  
- Reflection  
- Audience  
- Story structure (storyboard, optional)  
- Ideas: existing photographs/images  
- Defining the length  
- Mouse and keyboard dexterity  
- Developing relationships with learners | - Scaffolding DST:  
  - Using existing models from experts, teacher or previous students  
  - Demonstrating time and word length relationship | - Watching  
- Listening  
- Speaking  
- Reading  
- Writing  
- Interactive videos:  
  - Listening  
  - Watching  
  - Interacting  
  - Online reading /typing  
  - Practicing mouse dexterity  
- Reflecting on learning. | - Computer and the Internet:  
  - Capture Wales  
  - BBC WebWise Interactive videos  
- Online dictionary  
- Smart phone:  
  - Voice memo of 100 words (1 minute)  
- Printed paper with 100 word narrative  
- Worksheets:  
  - Matching  
  - True/false  
  - Gap Fills  
- Dictionary  
- Headphone sets | - Reading  
- Writing  
- Numeracy  
- Forming and giving opinions  
- Questioning  
- Discussing  
- Negotiating  
- Problem Solving  
- Digital literacy:  
  - Technological:  
    - Mouse and keyboard skills  
  - Visual:  
    - Understanding symbols  
    - Understanding QWERTY keyboard  
  - Media:  
    - Awareness of target audience |
<table>
<thead>
<tr>
<th>PHASE 2</th>
<th>KEY FOCUS</th>
<th>TEACHER STRATEGIES</th>
<th>LEARNER ACTIVITIES</th>
<th>TECHNOLOGIES AND RESOURCES</th>
<th>MULTIPLE LITERACIES/SKILLS</th>
</tr>
</thead>
</table>
| Seeing and Hearing the Story | - Typing the script Sharing written stories to discuss and reflect | - Alphabet through QWERTY  
- Group reading  
- One-to-one assistance in  
  - Image selection  
  - Voice recording: reading rhythm/mistakes  
  - Ownership  
- Modelling assembling:  
  - encouraging "play" (experiential learning)  
- Class management to promote peer teaching | - Computer use:  
  - Typing  
- Observing technical processes:  
  - Scanning  
  - Image capturing  
  - Voice recording  
  - "Saving as"  
  - Saving: Ctrl+S  
  - Assembling  
- Developing ownership by:  
  - Observing  
  - Questioning  
  - Answering  
  - Reading  
  - Assembling  
  - Typing  
- Reflecting on learning | - Hardware:  
  - Computer  
  - Headphone sets  
  - Splitting audio cable  
  - Microphone  
  - Audio Recorder  
  - Printer  
  - Scanner  
  - Pen drive  
- Software:  
  - Non-linear editing tool: Windows Movie Maker (WMM)  
  - Editing tool: Microsoft Word | - Reading/Reading  
- Questioning  
- Discussing  
- Negotiating  
- Problem Solving  
- Digital literacy:  
  - Technological Awareness:  
  - File storage/Back up Processes:  
  - Printing,  
  - Scanning  
  - Downloading  
  - Recording Mp3 audio files  
  - Visual Awareness: Assembling process:  
  - Importing files  
  - Video transition and effects:  
  - Timeline views  
  - Credits  
  - Image and audio narrative  
  - Media Awareness:  
    - Copyright  
    - Confidentiality |
<table>
<thead>
<tr>
<th>PHASE 3</th>
<th>KEY FOCUS</th>
<th>TEACHER STRATEGIES</th>
<th>LEARNER ACTIVITIES</th>
<th>TECHNOLOGIES AND RESOURCES</th>
<th>MULTIPLE LITERACIES/SKILLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assembling and</td>
<td>- Coherent mix of two narratives: audio and visual</td>
<td>- Modelling assembling:</td>
<td>- Assembling visual and audio narrative using WMM(“playing”)</td>
<td>- WMM</td>
<td>- Reading/Writing</td>
</tr>
<tr>
<td>Sharing the Story</td>
<td>- One-to-one assistance when assembling</td>
<td>- Transition and video effects</td>
<td>- Ownership:</td>
<td>- DVD burner software</td>
<td>- Numeracy</td>
</tr>
<tr>
<td></td>
<td>- Showcase</td>
<td>- Text and credits</td>
<td>- Discussing and negotiating narrative coherence</td>
<td>- DVDs and cases</td>
<td>- Questioning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Frame lengths:</td>
<td></td>
<td>- Splitting audio cable</td>
<td>- Discussing, Negotiating</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Timeline views</td>
<td></td>
<td>- Windows Media Player</td>
<td>- Problem Solving</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Projector</td>
<td>- Digital literacy:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Technological Awareness:</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td>- “Crashing”, Publishing</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Mouse dexterity:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Dragging and dropping files</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>- Double clicking</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Moving timeline slider and frame</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Keyboard:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Deleting</td>
</tr>
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<td></td>
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<td></td>
<td></td>
<td>- Ctrl+S</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Typing text and credits</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Visual Awareness:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Assembling process:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Image Narrative</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Using video controls</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Insert/delete frames</td>
</tr>
</tbody>
</table>
Table 9- Themes from Focus Group Interviews. Second iteration

<table>
<thead>
<tr>
<th>Study Time</th>
<th>Emotions/Feelings</th>
<th>Type of strategy</th>
<th>Tutors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doubled value of study time</td>
<td><strong>Before the experience</strong>: Lack of confidence, frustration, afraid to feel left out, nervousness</td>
<td>More time learning-longer sessions/more days</td>
<td>Enthusiasm</td>
</tr>
<tr>
<td>More time on the activity</td>
<td>Support is important</td>
<td>Willingness to repeat experience</td>
<td>Willingness to repeat experience</td>
</tr>
<tr>
<td>More time learning-longer sessions/more days</td>
<td>Perceptions of others in the group: all in the same boat</td>
<td>We were all in the same boat; more project work, more group work</td>
<td>Willingness to adopt different strategies</td>
</tr>
<tr>
<td>Time flew by</td>
<td>Perceptions of the world: technology is the future, connections with grandchildren and children</td>
<td>Collaboration: Help was great</td>
<td>Group bonding</td>
</tr>
<tr>
<td>Goals achieved</td>
<td><strong>After the experience</strong>: use of ATM, taking on a computer course, considering buying a computer, insecurity about reading and writing skills</td>
<td>Peer teaching: We helped each other</td>
<td></td>
</tr>
<tr>
<td>Other goals:</td>
<td>Self perception: more confidence, empowerment pride</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Willingness to learn further repeat the experience</td>
<td>More computer work in a safe environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participating in further computer training</td>
<td>Sharing on the Internet is not a motivator</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sharing with the group: motivator</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sharing with the family: motivator</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Younger generations at home willing to help</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Change the name of the literacy classes to computer literacy classes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Learners

Tutors
### Table 10- Themes from One-to-One Interview- Learners. Second iteration

<table>
<thead>
<tr>
<th>Time spent learning/goals achieved</th>
<th>Did you learn about reading and writing when working on the project?</th>
<th>We learned so much Need to get better at reading and writing</th>
<th>So much learning in 3 hours</th>
<th>Learned how to condense words within a timeframe</th>
<th>New vocabulary, spelling Computer lingo/jargon</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>How do you feel about learning computer literacy?</td>
<td>So much learning Gave me great confidence</td>
<td>A lot of fun, concentration</td>
<td>Need a lot of help</td>
<td>Another story</td>
</tr>
<tr>
<td></td>
<td>Do you like to work on your own or with the group?</td>
<td>With the group Sometimes on my own, like with the computer but I need a lot of help</td>
<td>I need a lot of help. If I am stuck I prefer to have someone to ask</td>
<td>Some people helped me when I was typing, it was great</td>
<td>Helping others helped me to realise others’ difficulties</td>
</tr>
<tr>
<td>Type of Strategy</td>
<td>How do you feel about repeating the experience?</td>
<td>Brilliant, excellent, fantastic, great, a lot of fun.</td>
<td>Now that we know I’ll do it differently</td>
<td>A lot of learning</td>
<td>Perhaps too much work</td>
</tr>
<tr>
<td></td>
<td>What did you like most?</td>
<td>Putting the pictures together Recording the voice</td>
<td>Writing the story Typing/printing Sharing the story at home</td>
<td>Using the computer. Listen to my voice</td>
<td>We were all in the same boat</td>
</tr>
<tr>
<td></td>
<td>What did you like less?</td>
<td>Nothing</td>
<td>I liked everything</td>
<td>The time was short</td>
<td></td>
</tr>
<tr>
<td></td>
<td>What do you think it was more difficult?</td>
<td>Writing the story</td>
<td>Putting the images together</td>
<td>Fitting the story within a particular time</td>
<td>Audacity The computer</td>
</tr>
<tr>
<td>Further goals</td>
<td>Would you attend a computer class?</td>
<td>Lack of confidence, nervousness Embarrassment/Fear of stigmatisation</td>
<td>More reading and writing first</td>
<td>More computer learning in the classroom</td>
<td>No: too fast! Yes: a lot to learn</td>
</tr>
<tr>
<td></td>
<td>Do you have further goals?</td>
<td>More reading and writing and activities with the computer</td>
<td>More project work with computer or another story</td>
<td>Buying a computer Attending a computer course</td>
<td>Getting help from younger family members</td>
</tr>
<tr>
<td>Confidentiality as a motivator</td>
<td>Confidentiality/Internet sharing</td>
<td>No because of stigma No because it was personal</td>
<td>Yes because it can inspire others</td>
<td>Yes shows skills/pride</td>
<td></td>
</tr>
</tbody>
</table>

<p>| |
| |</p>
<table>
<thead>
<tr>
<th>Time spent learning</th>
<th>Where the literacy goals achieved?</th>
<th>Definitely</th>
<th>They learnt so much, perhaps more that with the normal routines</th>
<th>People was very proud and that is difficult to achieve</th>
<th>They learned new vocabulary and spelling from words they will use in their speech</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Impressions about computer learning</td>
<td>They were fast very concentrated</td>
<td>They learn the same as in the initial classes of computer literacy</td>
<td>Makes them feel proud and confident</td>
<td>Opens up other possibilities</td>
</tr>
<tr>
<td>Type of strategy</td>
<td>How do you feel about repeating the experience?</td>
<td>Willingness to repeat experience</td>
<td>Confidence to request computer classes</td>
<td>A learner is taking a computer course as a result</td>
<td>Perhaps too much work Its worth it because of the amount of learning</td>
</tr>
<tr>
<td></td>
<td>Do you think that the project can be repeated successfully with other groups in AL?</td>
<td>Yes, although this group is very good</td>
<td>Other people may be reluctant to work in a project but they normally follow our advise</td>
<td>It may be time consuming but they learn so much that the effort is worth it</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Do you think it was appropriate for the type of learner?</td>
<td>Yes, they like to talk about themselves and their experiences</td>
<td>Yes, because it gave them other points of view about themselves and others in the group</td>
<td>Yes because it empowered them</td>
<td>Yes because the gained in confidence</td>
</tr>
<tr>
<td>Further goals</td>
<td>Are there further goals?</td>
<td>More project work with computer in the class</td>
<td>Willingness to adopt different strategies</td>
<td>Willingness to get in-service training</td>
<td></td>
</tr>
</tbody>
</table>

Table 11- Themes from One-to-One Interviews-Tutors. Second iteration
<table>
<thead>
<tr>
<th>Story Title</th>
<th>A day’s fishing</th>
<th>This is my life</th>
<th>My family</th>
<th>Jimmy’s visit</th>
<th>My baking course</th>
<th>My Story(1)</th>
<th>My Story(2)</th>
<th>My Story(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>59</td>
<td>56</td>
<td>25</td>
<td>49</td>
<td>38</td>
<td>56</td>
<td>41</td>
<td>?</td>
</tr>
<tr>
<td>Average Length (min)</td>
<td>1.16</td>
<td>50 sec.</td>
<td>1.48</td>
<td>1.40</td>
<td>1.43</td>
<td>1.43</td>
<td>1.05</td>
<td>1.26</td>
</tr>
</tbody>
</table>

**Technologies Used**

- WNM
- Interactive videos
- Digital camera
- Scanner
- Pen drive
- Printer
- Internet
- Facebook
- Audacity

**Multiple Literacies**

- Reading
- Writing
- New vocabulary
- Mouse and keyboard skills
- Collaboration
- Negotiation
- Expressing opinions
- Asking questions
- Peer teaching
Appendix 4

Storyboard
Appendix 5

Research Ethics Application

School of Computer Science and Statistics
Research Ethical Application Form

Part A

Project Title: Addressing the digital gap in adult literacy environments through the use of digital storytelling

Name of Lead Researcher (student in case of project work): M. Teresa Gonzalez

Name of Supervisor: Tim Savage

TCD E-mail: gonzalmai@tcd.ie Contact Tel No.: 0876254553

Course Name and Code (if applicable): MSc in Technology and Learning

Estimated start date of survey/research: 8/11/2012

I confirm that I will (where relevant):

- Familiarize myself with the Data Protection Act and the College Good Research Practice guidelines http://www.tcd.ie/info_compliance/dp/legislation.php;
- Tell participants that any recordings, e.g. audio/video/photographs, will not be identifiable unless prior written permission has been given. I will obtain permission for specific reuse (in papers, talks, etc.)
- Provide participants with an information sheet (or web-page for web-based experiments) that describes the main procedures (a copy of the information sheet must be included with this application)
- Obtain informed consent for participation (a copy of the informed consent form must be included with this application)
- Should the research be observational, ask participants for their consent to be observed
- Tell participants that their participation is voluntary
- Tell participants that they may withdraw at any time and for any reason without penalty
- Give participants the option of omitting questions they do not wish to answer if a questionnaire is used
- Tell participants that their data will be treated with full confidentiality and that, if published, it will not be identified as theirs
- On request, debrief participants at the end of their participation (i.e. give them a brief explanation of the study)
- Verify that participants are 18 years or older and competent to supply consent.
- If the study involves participants viewing video displays then I will verify that they understand that if they or anyone in their family has a history of epilepsy then the participant is proceeding at their own risk
- Declare any potential conflict of interest to participants.
- Inform participants that in the extremely unlikely event that illicit activity is reported to me during the study I will be obliged to report it to appropriate authorities.
- Act in accordance with the information provided (i.e. if I tell participants I will not do something, then I will not do it).

Signed: M. Teresa Gonzalez Date: 28/10/2012
Lead Researcher/student in case of project work

Part B

<table>
<thead>
<tr>
<th>Please answer the following questions</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has this research application or any application of a similar nature connected to this research project been refused ethical approval by another review committee of the College (or at the institutions of any collaborators)?</td>
<td>No</td>
</tr>
<tr>
<td>Will your project involve photographing participants or electronic audio or video recordings?</td>
<td>Yes</td>
</tr>
<tr>
<td>Will your project deliberately involve misleading participants in any way?</td>
<td>No</td>
</tr>
<tr>
<td>Is there a risk of participants experiencing either physical or psychological distress or discomfort? If yes, give details on a separate sheet and state what you will tell them to do if they should experience any such problems (e.g. who they can contact for help).</td>
<td>No</td>
</tr>
<tr>
<td>Does your study involve any of the following?</td>
<td></td>
</tr>
<tr>
<td>Children (under 18 years of age)</td>
<td>No</td>
</tr>
<tr>
<td>People with intellectual or communication difficulties</td>
<td>No</td>
</tr>
<tr>
<td>Patients</td>
<td>No</td>
</tr>
</tbody>
</table>

SCSS Research Ethics Application Form September 2011
School of Computer Science and Statistics  
Research Ethical Application Form

Details of the Research Project Proposal must be submitted as a separate document to include the following information:

1. Title of project
2. Purpose of project including academic rationale
3. Brief description of methods and measurements to be used
4. Participants - recruitment methods, number, age, gender, exclusion/inclusion criteria, including statistical justification for numbers of participants
5. Debriefing arrangements
6. A clear concise statement of the ethical considerations raised by the project and how you intend to deal with them
7. Cite any relevant legislation relevant to the project with the method of compliance e.g. Data Protection Act etc.

Part C

I confirm that the materials I have submitted provided a complete and accurate account of the research I propose to conduct in this context, including my assessment of the ethical ramifications.

Signed: M. Teresa Gonzalez Date: 28/10/2012
Lead Researcher/student in case of project work

There is an obligation on the lead researcher to bring to the attention of the SCSS Research Ethics Committee any issues with ethical implications not clearly covered above.

Part D

If external ethical approval has been received, please complete below.

External ethical approval has been received and no further ethical approval is required from the School’s Research Ethical Committee. I have attached a copy of the external ethical approval for the School’s Research Unit.

Signed: ___________________________ Date: _____________________________
Lead Researcher/student in case of project work

Part E

If the research is proposed by an undergraduate or postgraduate student, please have the below section completed.

I confirm, as an academic supervisor of this proposed research that the documents at hand are complete (i.e. each item on the submission checklist is accounted for) and are in a form that is adequate for review by the SCSS Research Ethics Committee

Signed: ___________________________ Date: 2/11/2012
Supervisor

Completed application forms together with supporting documentation should be submitted electronically to research.ethics@scss.tcd.ie Please use TCD e-mail addresses only. When your application has been reviewed and approved by the Ethics committee hardcopies with original signatures should be submitted to the School of Computer Science & Statistics, Room F37, O’Reilly Institute, Trinity College, Dublin 2.

SCSS Research Ethics Application Form September 2011
Title of Project
Addressing the digital gap in adult literacy environments through the use of digital storytelling.

Purpose of Project including academic rationale

The purpose of this study is to explore the use of digital storytelling as a pedagogical framework to address the digital gap within adult literacy environments.

There is a correlation between low digital literacy and low adult literacy. Adults with poor literacy are already experiencing a knowledge gap that influences their life opportunities. The increasing use of digital technologies in modern society creates an even greater gap for them.

Humanistic and Cognitive theories and current practice in Ireland will inform the pedagogical aspect of digital storytelling in adult literacy environments.

One of the strategies used in adult literacy programmes is storytelling. This technique combines reading and writing activities. It aims to use meaningful and authentic texts written by learners about their experiences. By using digital storytelling as a pedagogical framework learners will be working on their reading and writing skills while engaging in the process of scripting. In addition, they will be working in the production of an audio file of their voice reading the story and the selection of images and/or text to illustrate it. The resources will be combined in a Windows Movie Maker project with assistance provided at all times.

The aims of the study are:
- To explore the use of digital storytelling as a pedagogical framework in teaching literacy to adults.
- To explore if the use of meaningful and authentic texts and digital technologies can enhance reading and writing skills.
- To explore if participants’ perception of their computer skills has changed.

To achieve this it is necessary to carefully design and construct a learning experience that can be implemented and replicated in adult literacy environments.

Brief description of methods and measurements to be used

The researcher will be a participant observer and a facilitator in collaboration with the in-service literacy tutors. It is intended to collect data using the following methods:

- Observations will inform the researcher of previous skills and attitudes towards the computer.
- The learning artefact (digital story) to observe computer skills.
- Participants will be asked to participate in a semi-structured interview after the learning experience.
School of Computer Science and Statistics  
Research Ethical Application Form

- Tutor/s will be asked to participate in a semi-structured interview after the learning experience.

Participants: recruitment methods

Participants will be recruited from the Adult Literacy Department of Wexford VEC in the Gorey Civic Centre. Permission has been granted by the Adult Literacy Organiser to conduct a workshop aimed to familiarise the participants with the researcher as an ICT facilitator and as a researcher. The researcher is also a volunteer in the programme.

The number of participants expected (depending on consent) is approximately seven.

The group has been chosen by the Adult Literacy Organiser based on the convenience of this workshop for the group. Groups in this environment are small. The tutor-learner ratio is 1:6 and two tutors if it exceeds six. Therefore this group has two tutors.

The participants will engage in this research project within their two hour weekly class. The workshop will run for a period of ten weeks in the one hour session dedicated to group activities.

Prior to their participation the researcher or/and the tutor/s will read the consent form and they will be explained its implications.

Debriefing arrangements:

Participants are in a programme that involves great confidentiality and delicacy. Practice in this programme is learner-centred. It is based on the learner’s aims and needs, therefore the context must make the participant feel comfortable about what they are learning and for what purpose. Throughout the process the participants must feel that their interests and strengths are appreciated and their difficulties identified.

As many of the participants may have reading difficulties the researcher and/or the tutor will explain the objectives outlined in the information sheet regarding the nature of the project and the activity.

The participants will be informed by the tutor/s and in more detail by the researcher of the main objectives of the study previous to the commencement of the workshop. These are:

- Researcher participant’s presence in the classroom previous to the commencements of the workshop.
- The research nature of the workshop.
- The right of non-participation in the research.
- The opportunity to use the workshop to get guidance in gaining other basic computer skills if they opt not to participate in the creation of a digital story.
The skills gained by writing a short story.
The activities that are involved.
The steps involved in digital storytelling.
The skills gained by creating a digital story.
The tools used.
The assistance provided.
The collaborative aspect of the activity.
To ask any questions and raise concerns.

Ethical considerations

The research project will take place during the participant's two hour weekly sessions. However if participants decide not to consent they can still participate in the learning experience. Consent forms will be accompanied by information sheets (please see attached documents).

As this research involves the use of computers by participants, individuals with epilepsy cannot take part in the learning activity.

To comply with the Data Protection Act the name of the participants will be kept anonymous within the piece of the research. The participant details will be masked and the document will be password protected and kept in a password protected computer.

No personal information of the participant will be published and the data collected will not be available in any public forum.

At the conclusion of the project a debriefing session will take place giving the participants the opportunity to ask any questions or to raise concerns.

Following analysis of data, the Adult Literacy Organiser will be informed of the result.

Relevant Legislation
Data Protection Act.
TRINITY COLLEGE DUBLIN
INFORMED CONSENT FORM

LEAD RESEARCHERS: M. Teresa Gonzalez

BACKGROUND OF RESEARCH: As part of my Masters in Computer Science (Technology and Learning) in Trinity College Dublin, I am required to conduct a research project. The research project I would like to conduct is to explore the use of digital storytelling as a pedagogical framework to address the digital gap within adult literacy environments. The project will use a story created by the learners using their reading and writing skills. With the assistance of the researcher learners will create a multimedia story using images, text and audio.

PROCEDURES OF THIS STUDY: In this workshop you will be writing a story. You will be using your voice to read the story that you will record. Your voice, some still images and perhaps some typed text will be combined to create a digital story or short video that will belong to you.

Help and guidance will be given throughout the workshop. You can benefit from this workshop in several ways:

- By using the computer as the tool to build your digital story and see how it is done while getting familiar with some basic aspects of computer tuition.
- By writing your story to practice grammar rules e.g. punctuation, spelling.
- By reading your story to practice your reading skills.
- By creating the digital story that you will own and which you can share with your family and friends.

If you agree to participate at the end of the workshop you will be interviewed by me. I will be using a voice recorder. The questions I will ask you are about your thoughts in relation to this experience. If you do not want to be part in the research project but you still want to participate in the workshop no information will be collected from you.

If you decide to participate and want to stop during or after the workshop none of your information will be recorded and it will not be used in the research. So there is no problem if you choose to participate now but change your mind later. Just let me know or let the tutor know.

The workshop will take place every Thursday morning and it will be part of your group activities, about an hour duration. This workshop will run until up to Christmas. When you are back from the Christmas break I will be meeting you for interviews before or after your normal timetable.

Once I have looked into the information from the interviews and my observations I will inform the Adult Literacy Organiser about the success of the activity so other tutors may use it in the classroom.
The Data Protection Act is the law that makes sure your name and other personal information will not be used for other purposes except the ones specified in the research and requires that your name will be kept anonymous.

The audio recording from the interview will not be made available to anyone other than the researcher. The recordings will not be played in any public forum or in the presentation of the research.

**PUBLICATION:** Your personal information will not be published and the data collected will not be available in any public forum except for the internal/external examiners in Trinity College Dublin.

Individual results will be gathered together anonymously and the research report will be based on these anonymous results.

**DECLARATION:**
- I am 18 years or older and am competent to provide consent.
- I have read, or had read to me, a document providing information about this research and this consent form. I have had the opportunity to ask questions and all my questions have been answered to my satisfaction and understand the description of the research that is being provided to me.
- I agree that my data is used for scientific purposes and I have no objection that my data is published in scientific publications in a way that does not reveal my identity.
- I understand that if I make illicit activities known, these will be reported to appropriate authorities.
- I understand that I may stop electronic recordings at any time, and that I may at any time, even subsequent to my participation have such recordings destroyed (except in situations such as above).
- I understand that, subject to the constraints above, no recordings will be replayed in any public forum or made available to any audience other than the current researchers/research team.
- I freely and voluntarily agree to be part of this research study, though without prejudice to my legal and ethical rights.
- I understand that I may refuse to answer any question and that I may withdraw at any time without penalty.
- I understand that my participation is fully anonymous and that no personal details about me will be recorded.
- I understand that if I or anyone in my family has a history of epilepsy then I am proceeding at my own risk.
- I have received a copy of this agreement.

**PARTICIPANT'S NAME:**

**PARTICIPANT'S SIGNATURE:**

**Date:**

**Statement of investigator's responsibility:** I have explained the nature and purpose of this research study, the procedures to be undertaken and any risks that may be involved. I have offered to answer any questions and fully answered such questions. I believe that the participant understands my explanation and has freely given informed consent.

**RESEARCHERS CONTACT DETAILS:** gonzalmt@tcd.ie

**INVESTIGATOR'S SIGNATURE:**

**Date:**
Letter to the Board of Management

Dear Sir/Madam,

I would like to ask the Board of Management of Co. Wexford VEC for permission to conduct a postgraduate research project in collaboration with the Adult Literacy Department in Gorey as part of my Masters Degree in Computer Science (Technology and Learning) in Trinity College, Dublin. I have thought of Gorey Civic Centre as the most convenient location due to my role as a volunteer tutor in the one-to-one programme.

The research project I would like to conduct is to address digital literacy problems among adult literacy learners by adapting and enhancing technologically an existing adult literacy strategy. The project would use a pedagogical design to deliver a digital story output using traditional strategies such as storytelling.

Ethical permission will be sought from Trinity College prior to the initiation of this project and I will enclose a copy of the proposal which I will submit to the Ethics Committee for your perusal. All data will be collected anonymously in compliance with the Data Protection Act.

I have included a more detailed outline of the project and would be happy to answer any questions you may have about it.

I look forward to hearing from you.

Yours faithfully,

Teresa Gonzalez
Project Outline

There is a correlation between low digital literacy and low adult literacy. Adults with poor literacy are already experiencing a knowledge gap that influences their life opportunities. The increasing use of digital technologies in modern society creates an even greater gap for them.

Humanistic and Cognitive theories and current practice in Ireland will inform the pedagogical aspect of digital storytelling in adult literacy environments.

One of the strategies used in adult literacy programmes is storytelling. This technique combines reading and writing activities. It aims to use meaningful and authentic texts written by learners about their experiences. By using digital storytelling as a pedagogical framework learners will be working on their reading and writing skills while engaging in the process of scripting. In addition they will be working in the production of an audio file of their voice reading the story and the selection of images and/or text to illustrate it. The resources will be combined in a Windows Movie Maker project with assistance provided at all times.

The aims of the study are:
- To explore the use of digital storytelling as a pedagogical framework in teaching literacy to adults.
- To explore if the use of meaningful and authentic texts and digital technologies can enhance reading and writing skills.
- To explore if participants perception of their computer skills has changed.

To achieve this it is necessary to carefully design and construct a learning experience that can be implemented and replicated, if successful, in adult literacy environments.

Implementation

As many of the participants may have reading difficulties the researcher and/or the tutor will explain the objectives outlined in the information sheet regarding the nature of the project and the activity.

The participants will be informed by the tutor/s and in more detail by the researcher of the main objectives of the study previous to the commencement of the workshop. These are:

- Researcher participant’s presence in the classroom previous to the commencements of the workshop.
- The research nature of the workshop.
- The right of non-participation in the research.
- The opportunity to use the workshop to get guidance in gaining other basic computer skills if they opt not to participate in the creation of a digital story.
• The skills gained by writing a short story.
• The activities that are involved.
• The steps involved in digital storytelling.
• The skills gained by creating a digital story.
• The tools used.
• The assistance provided.
• The collaborative aspect of the activity.
• To ask any questions and raise concerns.

**Ethical considerations**

The research project will take place during the participant’s two hour weekly sessions. However if participants decide not to consent they can still participate in the learning experience. Consent forms will be accompanied by information sheets (please see attached documents).

As this research involves the use of computers by participants, individuals with epilepsy cannot take part in the learning activity.

To comply with the Data Protection Act the name of the participants will be kept anonymous within the piece of the research. The participant details will be masked and the document will be password protected and kept in a password protected computer.

No personal information of the participant will be published and the data collected will not be available in any public forum.

At the conclusion of the project a debriefing session will take place giving the participants the opportunity to ask any questions or to raise concerns. Following analysis of data, the Adult Literacy Organiser will be informed of the result.
Project: Addressing the digital gap in adult literacy environments through the use of digital storytelling.

Board of Management Consent Form

The Board has been provided with an information sheet which describes the activities the participant will take part in, how data will be collected and stored and how it can contact the researcher. The board understands that it may withdraw the Gorey Adult Literacy Centre from the project at any time should it wish to do so for any reason and without any penalty.

Signature of chair of Board Management

Date

Name: Adult Literacy Department, Gorey.

Signature of Project Leader

Date
Screenshot of the software the participants will be using:

Windows Movie Maker

Audacity

Other resources:
http://www.bbc.co.uk/webwise/sitemap/
School of Computer Science and Statistics
Research Ethical Application Form

These are some of the questions to be asked to the participants after the workshop during the semi-structured interview:

Age:
- How long have you been in the programme?
- How did you find the experience?
- What did you learn?
- Was it helpful/unhelpful?
- Would you have preferred to work on your normal activities?
- Did this activity make you feel uncomfortable? Why?
- Was activity enjoyable?
- Do you notice any change in your confidence?
- Would you like to learn more about the computer? Why?
- Do you have a computer at home?
- Do you use it?
- Do you have internet connection at home?
- Do you think that being able to use the computer can help you? How?
- Do you use Social Media e.g. Facebook?
- Do you have a mobile phone? Does it have a camera? Do you use it?
- Did you find the activity easy or difficult? Why?
- If given the opportunity, would you like to repeat this experience again?
- Would you recommend this experience to others in your circumstances? Why?
- Is there anything else you would like to say about the experience?
Dear Mayte,

Thank you for this additional documentation; your application has now been approved by the Ethics Committee. You may now proceed with this study.

We wish you success in your research.

Many thanks

Gillian
Appendix 6

Scanned Coding of Transcripts

Q: Did they help with the...
A: They did yeah.
Q: The mouse?
A: Yeah, yeah.
Q: Did you play the games?
A: Did yeah, I enjoyed that.
Q: Did you find it difficult to read on the screen?
A: I did yeah, a bit difficult, if you don’t understand the word and you press on the wrong...
Q: Did you have problems reading the different labels, the mouse, the keyboard to go to the next video...
A: Oh now, I was ok with that [hesitating]
Q: And we were doing the story, putting things together, did you find it difficult to read things on the screen?
A: Yeah, that was a bit difficult yeah.
Q: That was smaller yeah.
A: Yeah, yeah [hesitating]
Q: What part did you like most of what we did or enjoy most?
A: I enjoy the story.
Q: Writing the story?
A: Yeah and then I enjoy to print on the computer because it was the very first time.
Q: The first time you printed something?
A: Yeah, yeah to see it.
Q: Do you find it difficult to work with the keyboard?
A: I did yeah, because is not... How do you call it?
Q: Alphabetical order?
A: Yeah.
Q: The GUIERTY, it’s called the GUIERTY, it showed you [...]
A: Yeah, spending time looking for the letter, you know what I mean?
Q: Do you use the computer outside the room?
A: No I haven’t got one.
Q: Do you have one at home?
A: No! I used to have one years ago myself but I gave up and I never replace it if you know Q: And what about practicing in the classroom?
A: Yeah, I would be interested in that but first I think I should try to get the grips better in my spelling and reading I think it would help.
Q: Do you think it would help?
A: I think it would help if I knew, you know what I mean?
Q: Do you think that you need a lot of reading and writing for what you did?
A: Yeah for working on the computer... [hesitation] I think you would, when you need... to be better, I think you would, wouldn’t you?
Q: But for doing the story...
A: Oh, once I was showed I was able to [...?] you know what I mean?
Q: Would you join a computer course?
A: Well [hesitation] the way I’m at the moment I think I’d be better to what I am at Q: Yes.
A: But if I improve, maybe I would be better.
Q: You would like to learn more?
A: Yeah, yeah, I would like to know how to work at the computer I would...
A: Yeah, I liked that.

Q: Did you feel like you were not learning about reading and writing or do you feel like you were learning anyway?
A: Oh yeah, I was learning new words...

Q: Because of your story?
A: Yes, yes.

Q: And when you were at the computer did you feel like it was difficult to read the words on the screen?
A: No, no, that was easy

Q: Would you have mind if I had told you that this stories were going to be published in the internet?
A: No, no, I wouldn't mind

Q: If you had to do another story but this time it wouldn't be about yourself but about something that you like like knitting, would you be willing to do it?
A: Oh I would yeah, yeah

Q: Do you think you would need as much help as with the one we did?
A: No I wouldn't say so

Q: Because?
A: Because I've improved...

Q: You have improved a lot
A: Oh yeah, I've improved a lot

Q: So when you watch your story with your family how that made you feel?
A: Very good, mm, mm, proud of myself

Q: Would you like to say something?
A: No, No, and thank you very much for your help
A: Oh god, when was that (thinking) it was about...
Q: In September?
A: It's a good few months anyway...
Q: But were you here last year?
A: Yes I was doing one-to-one. I started with the group after the summer.
Q: So far it was a new thing to be in a group?
A: Yeah.

[...]

Q: When you started what were your goals?
A: My goals... My goals are learn how to read, write and spell and doing maths.
Q: Now that you mention the maths, did you pay attention to the time and the seconds when we were putting the pictures together?
A: I didn't pay attention to that. I was paying more attention to how to put the pictures up in order. I wasn't worrying about the time or anything or the seconds. I was more interested in how you put the pictures together to make a sort of a book.
Q: But did you realise that we were stretching the time sometimes...
A: Yes, yes, yes....

[...]

Q: What activities were your favourite ones?
A: "Me" favourite one... I have to say, is writing the story, like, that would be mine...
Q: Was it? You like writing?
A: Well [hesitation] it's not that I like writing. I just never bother doing it, but then when it starts coming into the class and the one-to-one and the computers... I rather had more work, but more writing involved, practice "me" writing.
Q: And the fact that you were talking about something that you knew...?
A: We were talking about that earlier on. [...] It's like the remote control at home. You know, I'm not technical at all. It just takes me longer.

Q: But you know that with enough time, you will be able to do it?

A: Oh, yeah, yeah, I wouldn't be afraid to ask for help neither. Except that there is so many in there and everyone was looking for help in Java, it's hard for you to be...

Q: And do you find Astra's help good?

A: She was brilliant but even Oria was, she was brilliant to me.

Q: Oh, Was she helping you? I missed that part.

A: Oh, yeah, when we were on this side, Oria was brilliant. I have to say. This is when we were typing it.

Q: I was probably in and out of the class...

A: You were... and you see, what you did was... you did all the structuring, remember all the colours and all that and the photographs but this was when I typed it, because the typing was done first, so that's when... Oria was brilliant. I have to say. So rather than me that I have to call Maria, Oria kept looking over and then Marla was going out... "get back you" you know [laughter] but I found it great. But all the help was brilliant [...]

Q: What activities were your favourite ones?

A: I think the photographs and the back-scanning was brilliant, you know, the colours and all... playing with that. I think it was great. That was brilliant now, yeah. And the the photographs... and then we were putting the photographs on myself... remember? Moving them down an all. [excited] that's was just... you know... a great achievement, that was great, it really was like that was all fantastic, yeah...

Q: There are members of your family that use the computer at home. What do you think when you see them?

A: They are very unobtrusive [laughter]. I would go down to my daughter. Hi! [...] noises imitating the keyboard on the table "na na na na" ah get off that computer... and then I just say I am off goodbye. No they are very unobtrusive, you see this what is stop me getting on, because my husband is gadget man and he would never be off it. And I really do feel that it will break us, will kill one another if we have one, so I need to learn to do it first before he does because I'm telling you [laughter]. My son said to me will be buy the laptop. And straight away I said NO! Do you want me to divorce? Because he has like, flying helicopters, he has the Wii, he has all these gadgets and I just find it very unsocial. And even going to people's house they are on the phone... Even in Christmas day I wouldn't let them to put the telly on... [...] I love my music on...[...]

Q: Do you think it was enough time to do the activity?

A: I would have loved longer... I could have done the three hours on it and the time just goes so fast, you know, you could have spent...

Q: Or maybe a few more weeks... Now that you do not have to learn how to use the mouse and other things, would you be able to do it with less help?

A: I don't know whether I know enough.

Q: Do you remember that first time we sat at the computer and the man was talking?

A: That was brilliant! And even for you refractions and all of that. That was great, all of that.

Q: Normally computer classes include the to learn how to use the mouse and

A: yeah and there is a lot of there too, isn't it?

Q: This stories are done to show that we are using the computer as tool to learn several literacies

A: like you brought as totally blank and we were able to do it.

What we did was amazing like, because we went in lots say blind folded and look what we came out with! And was in a matter of what... 4 weeks 5 weeks? But it was only for an hour, it wasn't for the three full hours... imagine what we probably would have done?

A: you know? So you project is basically about trying different ways of teaching people?

Q: yeah using the technology at the same time.
Q: Would you join a computer course?
A: Well, I was asked, Tom joined one, on a Tuesday, and the lady over there came in and asked me and I said yes and then I thought, I rather learn more reading and writing before I go off to a computer course, because I would be very embarrassed if I came across a word that I have to ask in front of everybody doing a computer course. Do you know what I mean? So rather that embarrassed myself, I said I’ll learn more reading and writing and then I’ll do it. Do you know what I mean?
Q: Yes, I do.
Q: Did you know anyone in the group?
A: No

Q: What goal did you have when you joined in?
A: When I came over it was for reading and writing. That was the main goal and then you introduced us to computers. And then, I kind of got keen on the computers.

Q: Do you like it?
A: I love the computer.

Do you like to do three things at the same time?
A: Yeah, yeah.

Q: What activities are your favourite?
A: I love the computer.

Q: Do you like to work on your own or do you prefer to work with others?
A: I like the group, they are very nice people.

Q: When you are working on your own, do you mind doing that?
A: No, no, sometimes most times I am capable of doing that. It’s hard you know, if we get homework, and we have to bring it home and do something in your head, but I get it done.

Q: Did you enjoy working in the digital story?
A: Oh... Fantastic. Fantastic.

Q: Do you think it was enough time?
A: No, I’d like more. I’d like to do another. It was brilliant. I like to do another... The same we’d done.

Q: Now that you know the process, you will think differently. Because at the beginning you didn’t know...
A: We didn’t know anything.

Silence

I think they should have the computer course in with the learning of the writing and reading. They should have the computer course. We always say this when you weren’t there. We all agreed that the computer was very important and they loved it. There is no one in there that will say they didn’t enjoy it. Everyone enjoy it. You could hear a pin drop when we were in the computer. Nobody was talking or anything. We were all concentrating, brilliant.

Q: I never told you how to use the mouse, yes?
A: You did.

Q: Did I? How?
A: You showed me what finger to click with and...

Q: What else? Do you remember the videos?
A: Yeah, yeah.

Q: You were learning from the videos...
A: Yeah, Yeah.

Q: If someone is helping you while you are at the computer to find information, Could you do it on your own?
A: No, I wouldn’t be... I need help to get it.

Q: To get some guidance...?
Yeah, yeah. Like what you were doing before. You told me how to type it. You told me how to bring it down, go up, bring it down. So I would need help. Yeah, but if you help me I would be able to manage, you know what I mean?

Q: Did you find difficult to read on the computer?
A: No, NO, funny enough, I didn’t. No.
sharing some personal stories, that obviously has a positive impact in the group and then they started to use computer skills, is like one of the learners has already signed for a computer class, and another guy would like to and I think, but just for the moment is not as... He thinks that he needs to deal with his literacy first, I don't think that is necessary a bad idea but I do think now that Miriam and I should as the computer on a weekly basis facilitating a doing a bit of computers so he doesn't lose that desire...

It think too that introducing the computers because sometimes as a literacy tutor you think that all has to be the pen and the paper but I think almost has given to the entire group the license that is to use the computer and that is will help

Q: Do you think that this activity can be successfully used with other groups?
A: Yes, I absolutely do, yes... The real good thing about this activity is that it had a goal. It start with something and you knew what you were going to have done by then and it took a lengthy amount of time...

Q: It would have possibly needed a longer period
A: Possibly, yeah... on doing all of that it wasn’t that they hadn’t put their literacy to the side through that period, if fact maybe they got more out of the process with you that they would have got ordinarily, so I do have a little bit of a feeling that a very definite project for a period of time is a good way of proceeding literacy rather than just ambling through your classes week after week after week.

Q: What problems do you foresee if you run this activity with other groups?
A: Ehhh (hesitating... thinking) I suppose you have to be cautious what people put down on the paper, and just some people wouldn’t be self-conscious of what they might say about themselves, and... that is goodness on that also I would fear that somebody else in the group will judge them so I think you have to be careful what others... how you... what you let people to do, you know, put down on paper, telling somebody’s story but once it goes into print it’s hard to take it back so... I think that’s one thing that you have to be cautious about and also I think that everybody always respect the other person story, that’s the other side, you have to encourage people maybe not to... not to say too much, but them the people who are hearing or receiving the story needs to realise that, that is somebody else’s life and you can’t judge them. So there are the two things I think could be delicate, you know, but besides that I don’t think there’re issues, really. It’s all learning in terms of technology, once the learner is supported, you know, you prove them, how are they feeling about all this thing. Just it won’t be a problem but you do have to support them.

Q: How often do you review the individual learning plans?
A: Well, the individual learning plan that you are referring to, really in this center has... ehhhh really it has only started to be documented in recent times? Up until that there was an assessment and some pointer made in terms of what they have but... but we now kind of try to be a little bit more precise as to what a learner actually want to do to narrow down that goal, and then try to identify how are they going to do it, so that learning is done at the beginning of the year. In September, it’s review a Christmas time with a view to going forward then possible with a review in Easter again, but possibly not because of the type of learner we’re talking about it takes time even for the smallest of goals to be achieved, so...

Q: Had the learners asked for more computer tuition?
A: Yeah, I think everyone of them would like to do more computers, yeah, so it would be our intention not just to use it to teach them the computer...

Q: No, no
A: Yeah, but use it to ehhhh like I have, I suppose if I could answer the question this way. When I started tutoring I started tutoring I used to bring piles of stuff, I still have all this bag with me but... (laughs) I’m increasing using... ath websites. There is excellent comprehension exercises all over the internet, lots of the ESL materials online can be used with our learners because our goals are the same, as using the computer as a tool for literacy really is where I think of that. If you have to print exercises of that’s fine but I think reinforcing the wheel when all these resources are already on the computer... and so many have computers at home that one of the problems as a literacy tutor I feel is that they don’t do things at home, because of their embarrassment about their difficulties (breathing heavily) where is if they have the skill to see in front of the computer and do this some of these exercises on the screen at home they think, you know... Does it really feel a good thing about it, oh I am at the computer on all this and they forget about the issues that may be raised about, well I am actually learning how to spell something on this, but there, there’s mastering the technology so it breaks down so of the pen and paper barriers that you would typically experience... definitely

Q: So from a scale of one to five how would you rate the activity, one being least recommended and five highly recommended?
A: I think they wouldn't be able to do it on their own, but I knew they would be able to do it with help but taking the steps... but actually I found that they took to the computer and the mouse and the symbols much quicker than I anticipated. I think they gain certain amount of confidence to have their story wrote as well, that how they could see they were going somewhere [...]

Q: Where you expectations correct as to what extent did you think the activity has helped individuals or the group?

A: oh... definitely would have helped individuals you know the way... even the... like the three guys that have never sit at the computer before, one of them has join a computer class since but the other guy would be... you know, can sit on their own now and had certain amount of confidence while before he wouldn't had that

Q: Do you think it has help the dynamics of the group?

A: I think it probably did a good job as bonding you know there was three new people in the group and they started in September so, it would have helped that way.

Q: Do you think this activity can be used successfully with other groups?

A: oh I don't have a doubt about it.

Q: Why do you think so?

A: well, if it is introduced the right way... (thinking) even with the low skill learners

Q: So provided that you were assisted with technology, would you repeat that?

A: I wouldn't have a problem, but if I could have myself a couple of lessons

Q: Would the sound recording part is what is most messy but it is just about learning a programme.

A: their voices come out so clear, that's what amazes me

Q: So you are saying that it will work with other groups but which problems do you foresee, if the group wasn't as good as this one

A: I don't see a problem because after the big decision when they are in a couple of days they are prepared to trust you to lead them into certain direction if it is explained in the right way.

Q: How would you rate the activity from 1 to 5 being one not recommended and 5 highly recommended?

A: oh I gave a 5 the only thing I would take it back on is that it going to be only one hour a day but it turned out to take up the three hours but still from the literacy point of view the amount of learning they got out of it was absolutely worth it. you know the way the LPs that we have at the start, the individual Learning Programme, that had to be put to one side but they still get literacy tuition and lots of individual learning out of it

Q: Do you think the learners have improved their reading and writing competencies?

A: oh I imagine self-thinking I'll say words... for instance the guy that was doing the fishing, that he was mentioning different types of fish, he wouldn't have known that so he had to look up those and he has actually learnt those names and that he position the harbour in the wrong county[laughter] but it was as taking by it that he had forgotten to check that

Q: What do you think was the most important part of the activity for yourself and then for the learners?

A: For the learners to take the fear out of the computer to realise that is more to the computer that learn to go don to deal and buy and they use it to do something for themselves and their families

And for myself I'll say I've never made a video before and I still haven't made a video but I have a very good idea how to go about it if I have a little bit of help now and probably if I was long enough on my own I'll be able to figure it out but I would never though of making a video before

Q: So, would you like to go into a workshop to learn?

A: oh yeah, definitely I would because I would be a hands on learner doing the thing that I learn so it would suit me and once you have done it it is much more easy to tell people how to do it

Q: How often do you receive professional development?

A: Through the VEC? I've never skip one when they offer in-service tuition
Q: What was your first impression when you found out that someone was coming to do a project in the class involving the computer?
A: I was delighted, also because I knew it was an academic exercise because I am studying myself, so I was very interested to see how well it was handled. I found the group was totally embraced it. I wasn't concerned about that at all, and they did and are absolutely thrilled. So, yeah, my first impression was I was delighted. This will be very exciting, very different, control will be handed over a bit as well [laughter] that wasn't bad either. [laughter] I think everybody learnt from it? Tutor, learner, you obviously did as well.

So there was not hesitation, absolutely delighted.

Q: From your experience about the project, did you think they were going to be able to do it?
A: I suppose I knew it was madia and storytelling, it's kind of what I knew, but I don't know how that was going to happen... and maybe I thought that it was going to be more challenging but it really got complimented in terms of their getting their story done on paper, it really gets a lot of the work that we would have already done a lot of the years with the group and with the group, and with the group. Writing is still about that which is getting a person's life on paper, getting them to see their own experiences rather than to hand them a text to look for a particular part of grammar. It certainly compliments how literacy works that you start with something you know. So for them to get it done on paper, they've done that before and I know it was harder for some more that others and of course they all have to address sentence structure, but I didn't know how all the picture and all the writing going to work and from my point of view it was very smooth and it's very accessible to me as a tutor to be able to use it again and they learnt so much.

Some of them didn't know how to hold the mouse before so I think it broke down a lot of barriers for them. No I think that that is a beginning element of it as I expected, I didn't really know what the visual aspect was. I wasn't familiar with that software, that's all.

Q: Were your expectations correct? To what extent do you think it has helped 1 individuals and then the group?
A: I think it has helped everybody. I think it has helped the group dynamic and I think people are very supportive... like they were always good at each other? But I do think that there is a greater understanding... even from the very small part of view of their...
1. Time in literacy & including due to one.
2. Knowing others
3. What goals.
4. Favourite activities.
5. Working alone or with the group.
6. Like the story.
7. Time for the story.
8. Difficult to read on the computer.
10. More time spent at the computer?
13. Would you use a computer?
Gangs activated
Perceptions of self-confidence
Lack of confidence in the unit
Future planning

13/11 Reflection on experience
5 More goals achieved
13/11

15/11 — 13/11

Collaboration and spontaneous group activity
Relaxation at work

Willingness to participate in

Group site and research

Willingness to work on the computer.
FOCUS GROUP BY CHRISTIES

- Confidence - with the class in general, attending every day if they could
- Properly on the computer
- Different stories - group activity to share
- Oriental computer course:
  - Yes - first
  - No - he prefers to work in the class with the computer confidence
- Doing this specific project make a difference -
  - Comparison - not having doing the other normal class. It feels normal
- Comments of confidence and pride
  - Jayson - Bonnaig
bullet New, to help others
bullet Some observed confidence
bullet Putting the story and the picture together
bullet Computer is a gift - you'd know not interest if you can you

What did the whole project add to my reading and writing? Has it impacted my own thoughts about reading and writing?
It makes me anxious - it makes you more eager and anxious because now I can't wait. Delighted with my self

What is what I like to see in the new year is to spend an hour on the computer every week,
Concerns about spelling when doing a computer course - reading a lot - wait until they get better at spellings.

Dominant participants - Everybody talking at 2/3 voices weren't heard, at the same time.
Four group after Christmas
Reactions: Did you show your fish

- I was nervous
- Family thought it was brilliant, the idea of the voice
- Impress - the young family thought it was cool
- Laughter - humorous
- Cheer with pictures - took copy
- Family proud - emotion - cried

What do you think about the showcase?

- Very good
- Seeing mine - how it was put together
- It was a great project (Document follows)

Why do you think being able to use a computer is important?

It is necessary for everything now. I'm frustrated not to be able to
I don't have any problem saying that I wouldn't know how to use my computer, but I wouldn't
Say that I am not able to read or write.

I've started a computer class after learning
Others did other courses and they enjoyed it.
What did you think when I explained the project the first day?

- Panic
- Resignation
- Nervous

I thought I was not going to be able to do it. I was going to be left out, especially trying it on the computer. I saw others I agree will I be able to do it? I would try.

I enjoy it. It was a pity that the class wasn't longer.

What do you think you know now about the computer?

- Pictures
- Confidence
- Show us what to do and then we didn't
- Maybe we will buy one by in the summer
- Duty of watching others doing it for agreement
- The future
- I use the ATM for the first time, I lodge the money
- And that made me nervous. After a while sounded like somebody else.
- Voice sound totally different
What difference does it make to know that you can use the computer?
- I like it, but I still enjoy writing
- Others, I'd like to do a lot of computer.

If you were asked again to do it, would you do it?

Unanimously — Oh yes.

I was aware that I've done it.
This day wasn't long enough.
Your writing about you and nobody tells.
It's great to write it and then coming in and get help about the writing and decipher it all in one room, to themselves.

A story about potatoes, knitting, care, cod? Let's find information on the computer, let's find images and put it together in a story! Should we do it?

You learn from it.

Yeah.

It will take a while, but will manage.
Would you like to carry something? I enjoy doing the project, every body comments.
Appendix 7

Example of field notes diary.

15/11/12 5th week.
Research Ethics.

14-11-12.
Meeting with E+H to organise the class for next week.
They insight of the relationship between these and maybe learners themselves to make arrangements for more computers.

[Handwritten diagram with letters and numbers]

We agreed to aim for everybody to have written and printed you story by we going to read.