



DISCOVER
SKILLS FOR CARERS

DELIVERABLE

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D3.1 Content Specification v1.0

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Dissemination Level

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Revision History and Statement of Originality

Revision History

Revision	Date	Organization	Description
#0.5	19th July 2012	BCU	Underlying Assumptions and Concept Design, Drivers and considerations
#0.6	25 th September 2012	BCU	Additional Rationale, structure of courses, comments from OU and BIRM
#0.7	26 September 2012	BCU	Comments from BIRM, CASSALA
#0.8	27 th September 2012	BCU	Comments from ASTRA and OU
#1.0	28 th September 2012	BCU	Full version complete

Statement of originality:

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

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Executive Summary

This paper outlines our current thinking in terms of content development and the topic focus of this content. The conclusions and suggestions in this paper have been informed by the focus group research conducted by the OU during the first 6 months of this project (See Appendix 4) and the interviews and consultations with Carers and stakeholders that were conducted during the bid preparation process. Our conclusions have also been influenced by existing research.

The first section of this paper, describes the drivers and considerations that will influence the content developed for informal and formal carers during DISCOVER.

In lieu of more extensive consultations we have made a series of assumptions about the Carers who will be accessing DISCOVER content, the technologies they may use, and their internet connectivity etc... We fully anticipate the need to revise some of these assumptions during the first phase of the pilot and as we gather further qualitative information from the focus groups scheduled prior to this phase and areas requiring further research have been identified here.

The most important Carer needs identified by DISCOVER thus far are:

- Employability – skills required to write a CV and covering letter, and perform well during job interview/selection
- Communication – using technology to communicate with other carers, and those cared for and to enhance ability to care.
- Knowledge of health conditions – Using technology to increase knowledge of health conditions.

Aware that the levels of digital literacy amongst Carers varies greatly, we have suggested that a number of resources be created to help Carers with the lowest levels of digital skill to access technology and the resources we produce.

The second section of this paper describes one potential approach we may take, subject to further discussion with partners, to organising content and designing learning activities within DISCOVER. The approach provides Carers with themed pathways that if followed from the beginning provide opportunities to increase levels of digital literacy. Carers will however be able to access content at any point. Pathway themes currently suggested are:

Pathway 1: Enhancing Care Using Basic Digital Skills (Absolute Beginner)

Pathway 2: Digital Skills to Improve Work Prospects (Beginner to Advanced)

Pathway 3: Communicating as Carers Using Technology (Beginner to Advanced)

To respond to the identified need for more knowledge about health conditions we are suggesting the use of content curation tools such as Scoop.it. Given the vast amount of resource on health care conditions already publically available through a range of channels it seems prudent not to create bespoke resources around this topic area but to design activities within the existing themes that help Carers use technology to meet this need themselves.

Introduction

This document represents work conducted thus far towards D3.1 Content Specification for DISCOVER learning. This work has been informed by a number of focus groups and desk based research conducted both during the bid preparation process and more recently through activities based within WP2.

Although titled “Content Specification” this document describes a much wider range of related issues that we consider important in ensuring optimal learning. These include learning design, usability, the factors involved in multi-channel delivery of learning, choice of media, the heterogeneous nature of our informal and formal carer populations and the diverse contexts in which they may be living, working and learning.

As our thinking about content specification and learning design has evolved an increasing number of questions have been raised that we aim to address as this project progresses. Relatively little is currently known, for example, about how informal and formal carers learn and what their learning needs are. Little is known about the access carers have to the internet, technology in general and their motivations to learn. Understanding of how these factors vary across countries is at an equally nascent stage

A series of information gathering strategies described in WP4 D4.3 have been designed to provide, through iterative data collection, a clearer perspective on some of these issues.

We fully anticipate that this data will influence our approach to resource design and content specification and as such D3.1 will continue to evolve as DISCOVER progresses. This document therefore is a living document that will be regularly revised throughout this project.

As a starting point however, we have made a number of baseline assumptions about design, access to technology, learning opportunities and content specification that have been informed by the focus groups we have conducted to date and by relevant information currently available. This document starts by summarising these early findings and outlining these initial assumptions. It progresses to describe how these have led to our current design, technology and subject choices.

The content information identified here will form the basis of an initial release of the DISCOVER Learning platform that will launch in May 2013. The release will have components translated in the language of the four pilot sites and will be designed to test our baseline assumptions helping to ensure that further developments provide optimal and relevant learning opportunities to our sample pilot populations and the wider populations they represent.

Early Findings and Baseline Assumptions

Findings from Focus Group Interviews with carers in the UK and desk based research conducted during the bid preparation process and within Work Package 2 have produced a valuable foundation upon which an early iteration of DISCOVER learning can be created. Full findings from recent focus group interviews can be found in Appendix 4. These have informed the following key assumptions about carers and their need for and learning of digital literacies. These assumptions will be tested, held true or rejected and amended as DISCOVER continues but for now provide an important basis upon which content development and course design can begin.

Our assumptions are grouped within five parameters:

- Technology Used by Carers to Access Discover Learning Experiences
- The Nature of Carers
- Pedagogy
- Recognition and Certification
- Subject Focus

Each assumption is followed by a brief description of its influence on the design and development approaches DISCOVER will take and, where relevant, the additional information DISCOVER will explore within WP4.

Assumptions about technology

Devices Used to Access the Internet

Most carers will access the internet via a desktop or laptop computer. Our findings thus far lead us to anticipate that many of our carers will NOT possess SMART phones and/or tablet devices. Similarly, we anticipate that only a small percentage will access the web via IPTV or games consoles. However, as DISCOVER aims to future proof itself against the rapid and/or impending growth of technologies such as SMART phones and IP and Digital TV we are committed to providing, wherever possible, a multi-channel approach to delivery of learning opportunities.

We are working on the premise that laptop and desktop computers used to access DISCOVER learning will be no more than 4 years old.

Influence on Design and Development and further Research:

Creating content for multiple platforms and channels increases authoring effort and enhances the risk that too little content will be produced to have an impact on our carer populations. DISCOVER will therefore lean towards technology that affords single capture to multi-platform publication. That is, create learning materials once and then publish those materials so that they are playable on a variety of platforms. The Sonic Foundry Mediasite system. (See Section 4) will be used therefore to produce content for both mobile and desktop computers and smart phones. A technology and service provider in the UK, Looking Local, is also able to publish information to a range of digiTV, IPTV and mobile devices. This service is limited to supporting text and images as media. However given the increasingly widespread adoption of IPTV for example, we will develop “light versions” of DISCOVER learning using Looking Local in order to exploit the channels that this service provides.

The nature of some DISCOVER learning will include interactive multimedia that can only be reliably accessed on a desktop or laptop computer. In these instances we will sign post the need to access such devices.

Further research with our Carer populations within WP4, during the initial pilot delivery, will be conducted to determine access to devices and preference for using these.

Internet Connectivity

In the UK over 70% of households have access to broadband with an average speed of 8Mb/s. (ref OFCOM). DISCOVER for the moment will assume most carers will be able to access internet connection speeds of 1-2Mb. This assumes that, where carers do not have fixed line broadband connections in their homes, they have access to the internet through publicly available services such as libraries, community centres, wifi dongles and cafe’s.

Influence on Design and Development and further Research

Provide learning resources that have the lowest memory and bandwidth footprints possible without compromising on pedagogy and interactivity. Where higher internet connection speeds are required then sign post this clearly, make optional and/or provide alternatives.

Collate information on the internet connectivity of informal and formal Carers engaged with DISCOVER during the Pilot phases.

Software

Most carers will not have access to the latest operating systems or browsers and where such software is used this may be several years old.

Influence on Design and Development and further Research

Try and ensure that where browser plug-ins are required these are cross browser compatible and compatible with older versions of those browsers.

Collate information on the type of software carers are using during the Pilot phases

Assumptions about the Nature of Carers

Digital Literacy Skills

Carers are a population with a diverse range of digital literacy skills as evidenced by our focus group interviews. These range from complete novice to competent. This provides a challenge for DISCOVER as our sample populations will consist of individuals with a broad range of learning needs and of course learning contexts. See Figure 1: Spectrum of digital literacy competencies across carer population.

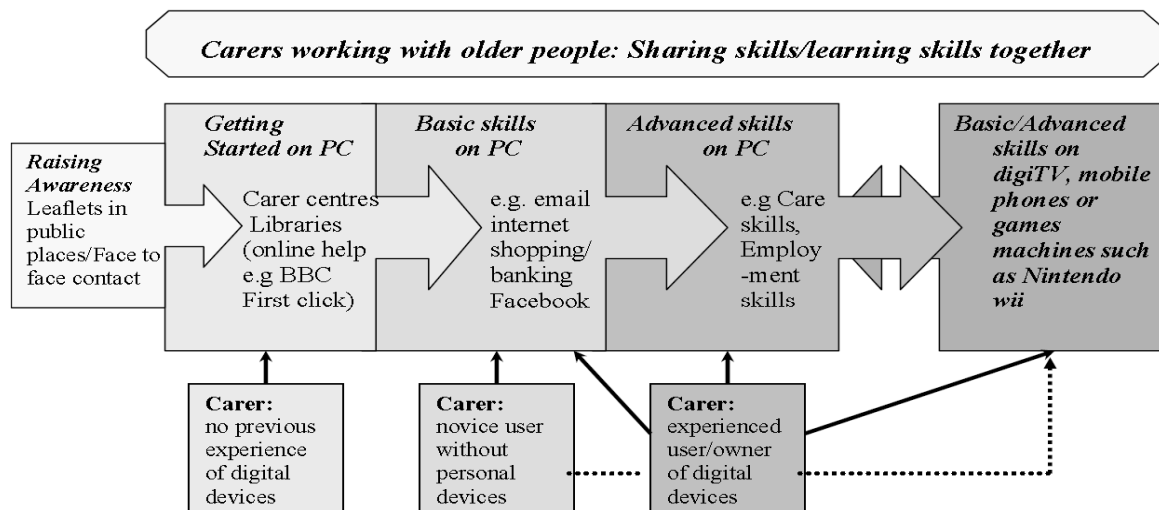


Figure 17 – DISCOVER learning pathway

Figure 1: Spectrum of digital literacy competencies across carer populations

Influence on Design and Development and Further Research

DISCOVER provides a technology solution towards developing digital literacies amongst carers which may present a paradox. That is, to develop digital literacies our learners will need to access digital resources which in turn require some form of digital literacy.

Resources presented within DISCOVER will be organised by the Levels of Digital Competency they are geared towards, level of learning and subject theme. Provisionally these levels are Beginner, Intermediate and Advanced. Although content and activities will be labelled in this way, access to any resource can be achieved independently of other resources. That is

Carers will be able to dip into and dip out of any element of DISCOVER learning, although navigation to this learning may be sequential.

For those Carers that wish to engage in DISCOVER through a more structured route, options could be provided that allow them to follow particular pathways of learning that will be sign posted through colour coding or icons.

Although resources addressing basic digital literacies and competencies are provided by a wide range of suppliers it would be prudent for DISCOVER to also provide elements of this level of learning. By contextualising examples of basic literacy learning for carers and providing this learning within the broader DISCOVER umbrella we will seek to create a **one-stop-shop** for a wider pool of carers, sign post these carers to additional DISCOVER learning and retain their interest in future DISCOVER offerings.

To ensure that learners are quickly able to take command of the media that DISCOVER deploys, How To Guides, will be developed to ensure early adoption and access.

Disabilities and Accessibility

We assume that attention to accessibility will be important for all of the resources DISCOVER produces.

Influence on Design and Development and Further Research

Resources will, as far as possible, provide accessibility options and/or will provide navigation tools that allow the Carer to engage with the resources at their own pace.

DISCOVER learning will provide icon based top and mid-tier navigation. Here symbols representing different, courses and/or learning activities rather than just text based descriptors will be used.

See Figure 2 : Style of Navigation Icons

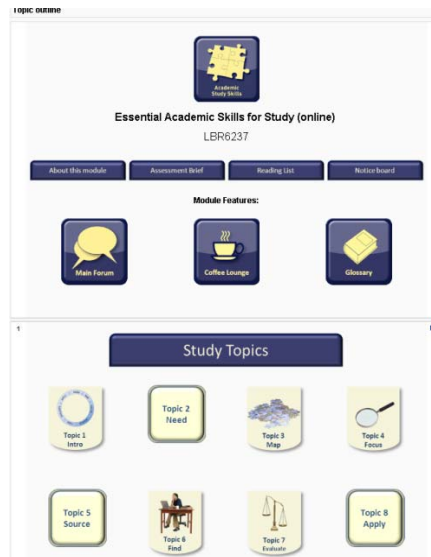


Figure 2 : Style of Navigation Icons

A colour scheme and font size will be chosen to promote the most optimal font and background contrast and interactive media will support where possible accessibility controls.

Pedagogy

Preference for Visual Media and Time to Learn

Findings from our own research and the literature indicate that, for informal carers particularly, the sheer burden of care prevents or significantly limits opportunities to engage in non-care activities. We anticipate that for informal carers the time they have available to access DISCOVER resources will be minimal. We are also aware that resources must be closely and overtly linked to carer needs and thus provide carers with a strong motivation to use them. Many informal carers will probably wish to dip in and out of DISCOVER and will have limited time to abstract meaning from un-contextualised media. If they don't find what they need quickly, or find the activities designed too challenging or time consuming, they will be less likely to return.

Contemporary thinking on factors that lead to effective learning suggests that learners playing an active role in their learning will have better learning outcomes.

Influence on Design and Development and Further Research

Learning activities and resources in general will be labelled so as to convey immediate relevance to Carer needs. DISCOVER learning will need to accommodate short bursts of user activity. This will be achieved by ensuring resources can be accessed to completion in approximately 10 min and/or have high levels of navigability to promote easy pick up from point where left off, and/or have save options that allow progress to be saved and future sittings to re-start at saved point.

DISCOVER learning will use images and video in addition to highly visual interactive and contextualised resources to promote meaning to formal and informal carers.

Where possible learning resources will provide levels of interaction that support learner engagement and feedback.

Group and Independent Learning and Level of Trainer Facilitation

We are currently unclear about the extent to which carers will wish to learn with other carers as part of a group activity and the extent to which carer learning within DISCOVER will be facilitated or simply mediated by trainers or others. We assume that many carers will value direct contact and/or support with a “trainer”, however, we are also cognisant of the resource implications this may place on pilot sites and the implicit time implications that for example group focussed activities may require of our Carer populations.

However, isolation and desire for peer support are needs that have been expressed within the focus groups DISCOVER has conducted to-date. DISCOVER provides an exciting opportunity to explore using a number of web 2.0 technologies whether Carer-initiated online discussion groups created using Mahara, hold value to our Carer populations.

Influence on Design and Development and Further Research

Offer and support the use of Mahara to encourage Carers to create discussion / support / interest groups of relevance to them.

Design in some learning activities within the initial DISCOVER release in May 13 should pilot site staff be in a position to facilitate these. Training for such staff will be made available through online resources.

Explore the extent to which Carers engaged in DISCOVER already access support networks, identify these networks and collate information as to their value in providing peer support.

Accreditation and Certification

DISCOVER has a nominal commitment to the EC, to ensure that 50% of its content provides some indication of certification and/or accreditation.¹ This commitment is dependent upon demand being expressed from our Carer populations and/or their representative organisations.

¹ See DISCOVER Approach to Certification and Accreditation of DISCOVER Learning doc in DropBox/Discover/WP3/Certification

Some carers, whether informal or formal, may wish to use DISCOVER to not only learn new knowledge and skills, but to also demonstrate this learning. These carers may value some form of certification and structure and may value an opportunity to evidence the skills and knowledge they have achieved either through their caring role or more immediately through DISCOVER learning activities. Such carers and care organisations may value a pathway or pathways that can be followed along which certification is provided as reward and recognition.

Other Carers may view such approaches as being too formal and of no relevance to them. Certification and Accreditation information may actually deter engagement.

Influence on Design and Development and Further Research

Currently we anticipate that DISCOVER learning will have academic weightings named Beginning, Intermediate Advanced, equivalent to Levels 1-3 in the UK (i.e. Pre-Undergraduate). We have been working towards ensuring that where possible DISCOVER learning will provide evidence of learning outcomes that can be reported by the DISCOVER platform and/or that can be collated by the learner in the form of certificates or through perhaps reflections and materials uploaded to an e-portfolio.

We are currently committed to trialling the ELC Certification system created by AUTH.

Subject Focus

Informed by our focus group interviews the following Carer needs have emerged:

- Communication – using technology to communicate with other carers, and those cared for and to enhance ability to care.
- Knowledge of health conditions – Using technology to increase knowledge of health conditions.
- Employability – skills required to write a CV and covering letter, and perform well during job interview / selection

In addition to content covering these themes we are proposing a further theme called

- Basic Digital Skill needs

This theme pre-supposes that some carers will operate from an extremely low Digital Skill base and that a suite of resources contextualised for carers and aimed at enabling access to basic digital technologies will be required if we are to avoid excluding some carers at the outset. E.g. What is a browser and how can I use it to find and organise information about health conditions?

The following section describes one approach, for discussion during the partner meeting, to structuring resources and activities in response to these needs.

DISCOVER Learning Zone – Learning Pathways

DISCOVER learning materials will be based within DISCOVER's MOODLE installation. This element of the DISCOVER platform may be called the DISCOVER Learning Zone². It is proposed, based on the evidence collated to-date, that the content and activities contained within the Learning Zone be grouped into three identifiable pathways:

Pathway 1: Enhancing Care Using Basic Digital Skills (Absolute Beginner)

Pathway 2: Digital Skills to Improve Work Prospects (Beginner to Advanced)

Pathway 3: Communicating as Carers Using Technology (Beginner to Advanced)

There is one notable mismatch between these pathways and the themes emerging from our research. The need for knowledge related to health conditions has not in this model been allocated to a specific pathway. This is for two reasons:

The need for information on health status and ill health as themes can be addressed within the context of activities and resources that fit within Pathways 1-3 and can provide some of the glue that holds these pathways together.

There is already a plethora of information available on the web about health and health conditions such that it would be difficult to provide novel content.

Given the vast range of health and ill health topics we could address, and the limited time we have available, any resources produced may only appear relevant to a small minority of carers.

A better solution to addressing any knowledge deficit may be to use a content curation service such as Scoop.it.

A high level overview of these pathways, the topics they may address, their respective levels and the media channels that learning opportunities may be distributed through are provided in the Appendix as Figure 3, Figure 4 and Figure 5:

These figures use a common schema through which learning materials will be organised. This will promote easy navigation but also provide structure, through specified pathways that some users may choose to follow.

² Learning may be too formal. Alternative could be Digital Skills Zone

Users will navigate to the Learning Zone from the main DISCOVER website and will land on the MOODLE Learning Zone home page. From this page they will have access to a number of short interactive guides that aim to help users to engage most effectively with the resources within the Zone.

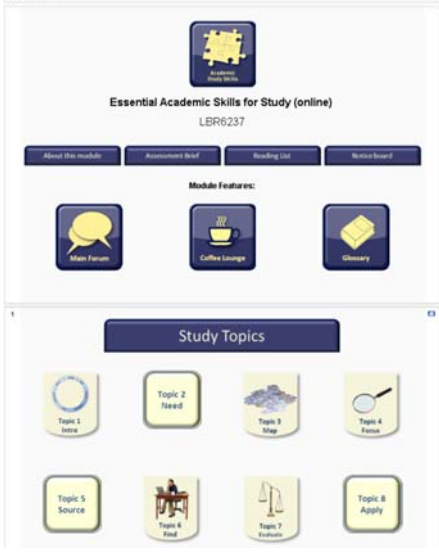
Users can from the landing zone select a pathway of interest explore the content available within that pathway and get a feel for the level of Digital competence and level of learning it is pitched at.




The core advantage of promoting pathways using this approach is that it may be easier to signal progression of skill acquisition, relevance to Carers, and certification and progression. The dangers of this approach are that it risks pre-determining Carer's needs and their motivations to learn. i.e. How many Carers wish to gain certification or will be inclined to follow a pathway to its conclusion.

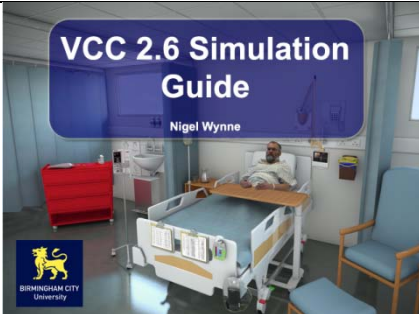

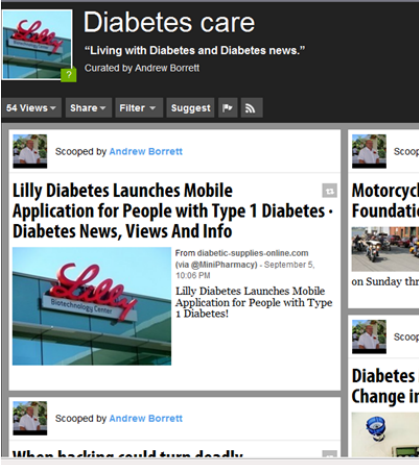
This proposed approach will be the subject of discussion at the Partner Meeting in Greece in October 2012.


Content Authoring Tools and Delivery Channels

The table below outlines the main content authoring, content delivery and technology channels BCU is anticipating that DISCOVER will use across all Pilots sites. Looking Local has been included here despite being a UK only service, as it demonstrates how DISCOVER will provide access to content through the additional channels of IDTV.

Platform/Authoring Tool	Description	Role in DISCOVER	Channel
MOODLE	 <p>The Open Source Course Management and Virtual Learning Environment. One of the most widely used globally. Provides a rich suite of learning activities, reporting functions and certification functions. Easily customisable. Easy to quickly change learning design and resource presentation if needed.</p>	Main Platform for Providing Access to Learning Materials and Activities	Desktop PC/Mac, Tablet iOS and Android, Smart phone.

<p>Mahara</p>	 <p>An e-portfolio platform that allows users to create and organise their own webpages, create CV's, upload resources to display as evidence of learning and create user online communities to which they can control access.</p>	<p>Will be linked to from MOODLE and could be used to provide opportunities for Carers to provide evidence of learning, create CV's, and create peer support groups.</p>	<p>Desktop PC/Mac, Tablet and Smart phone, iOS and Android.</p>
<p>Virtual Case Creator</p>	 <p>A software platform developed by BCU to create interactive scenarios that support discovery learning, information finding and decision making skills development</p>	<p>Used to create engaging and stimulating content that perhaps Carers and those Cared for could complete together.</p>	<p>Desktop PC/Mac, cross browser</p>
<p>Mediasite</p>	 <p>A teaching session recording and webcasting system, that provides easy distribution of content to a wide range of devices, providing a variety of templates</p>	<p>Rapid prototyping and distribution of ideas for content to DISCOVER partners.</p> <p>Efficient multi-channel delivery of content for Carers.</p> <p>Provides live and on demand multimedia streaming.</p>	<p>iOS (requires free app), Android, Blackberry, Phone and Tablets, Mac, PC, cross browser.</p>

<p>Camtasia</p>		<p>An e-learning content authoring tool kit. Allows efficient creation of interactive learning content engaging and interactive guides.</p>	<p>Creation of guides and bespoke DISCOVER content</p>	<p>PC Desktop Mac, some smart phone support.</p>
<p>Looking Local (UK Only)</p>		<p>An interactive service that supports text and image based information generally reflecting public services information and issues.</p>	<p>Distribution of basic content and signposting to additional DISCOVER learning opportunities.</p>	<p>IDTV, IPTV, Smart Phone and tablet iOS and Android, Nintendo Wii.</p>
<p>Scoop.it</p>		<p>A web tool that supports the quick curation of web pages around a specific theme.</p>	<p>DISCOVER may use this tool to create collections of web based information around disease and ill health, or other areas of need identified by Carers. We aim to explore whether some Carers and trainers would wish to take responsibility for their own Scoop.it site.</p>	<p>Desktop PC/Mac, smart phone iOS, Android.</p>

<p>Open Labyrinth</p>		<p>Open Labrynth provides interactive scenarios that can easily authored and that can integrate with MOODLE through SCORM.</p>	<p>Use OL to re-purpose existing content developed by Auth to demonstrate how knowledge of health care conditions can enhance ability to Care.</p>	<p>Desk top, PC/Mac</p>
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Development Schedules

Development of learning materials is scheduled to start during October 2012

First release of content within some components translated for use across all pilots is scheduled for May 2013 (M13)

From May 2013 Phase 1 of the Pilots will take place during which additional content creation will take place. This Phase lasts 6 months (M14-M19) and ends Oct 2013.

Phase 2 of the Pilots is currently scheduled to take place over 8 months (M20-27) and begins immediately after Phase 1 completes.

Towards the end of Phase 2 the summative impact evaluation of DISCOVER will take place.

For this impact evaluation there needs to be as much content available as possible to all pilot sites.

Summative evaluation starts during M26. A full 12 months before the DISCOVER project completes.

We are considering the possibility of altering this schedule of development to ensure that a bigger window of opportunity exists to create, refine and distribute content to all pilot sites prior to DISCOVER's summative evaluation.

Summary

The planned DISCOVER target Carer populations represent an extremely broad base of contexts, care needs and digital skills abilities.

Given this broad base we have developed an approach to generic digital skills development that should have appeal to many Carers.

We anticipate that the ideas expressed in this early version of D3.1 will change as we increasingly engage with our multi-site Carer populations.

DISCOVER aims both to produce resources and learning opportunities that reflect Carer needs and that have an opportunity to impact on Carers lives. To ensure we have an opportunity to demonstrate impact, a balance will need to be made between the amount of content developed, the time scheduled for development and the time additional Carer needs identified during the Pilots can be responded to.

These issues will be discussed fully during our Partner meeting in Greece in October 2012.

References

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PINQUART, M., & SORENSON, S. (2003). Differences between carers and noncarers in psychological health and physical health: A meta-analysis. *Psychology and Aging*, 18, 250–267.

Appendix 1: DISCOVER MOODLE Schema: Showing Details of Pathway One: Beginner Digital Skills

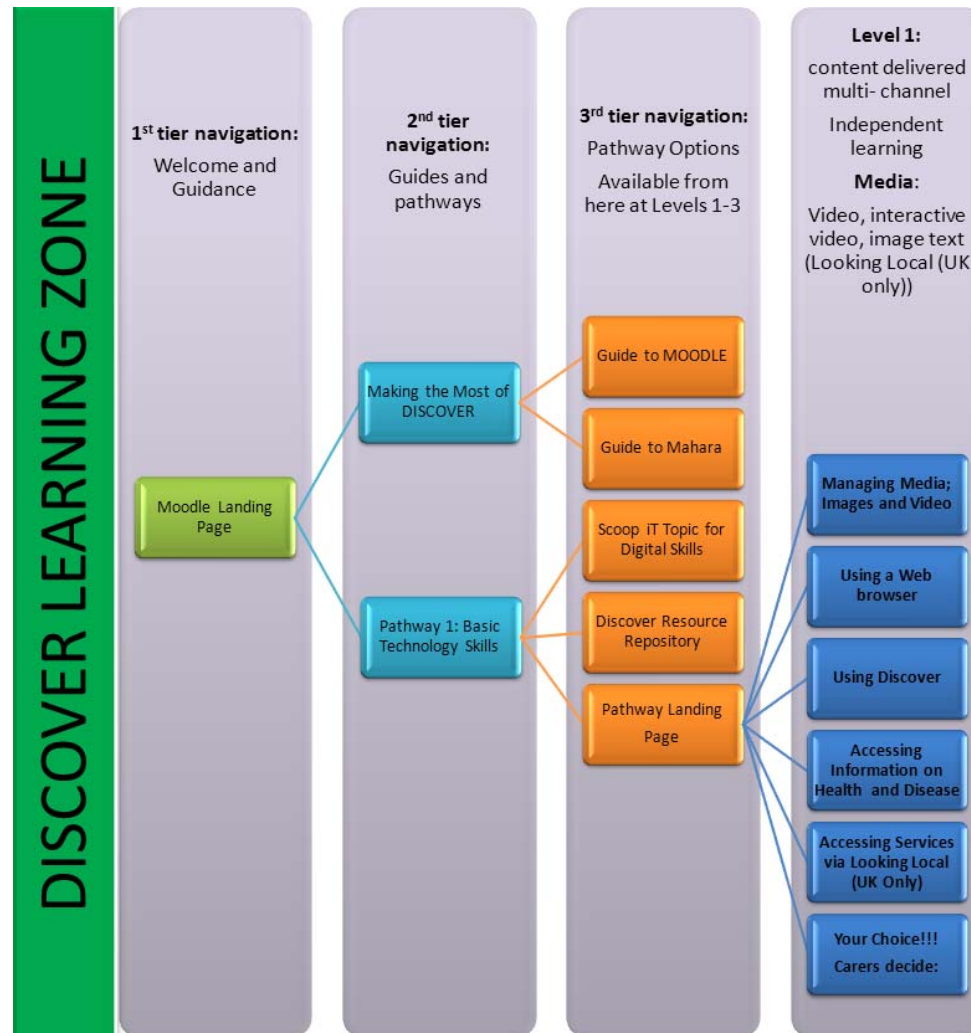


Figure 3: Pathway 1: Beginner Digital Skills

Appendix 2: DISCOVER MOODLE Schema: Showing Details of Pathway Two - Employability Skills

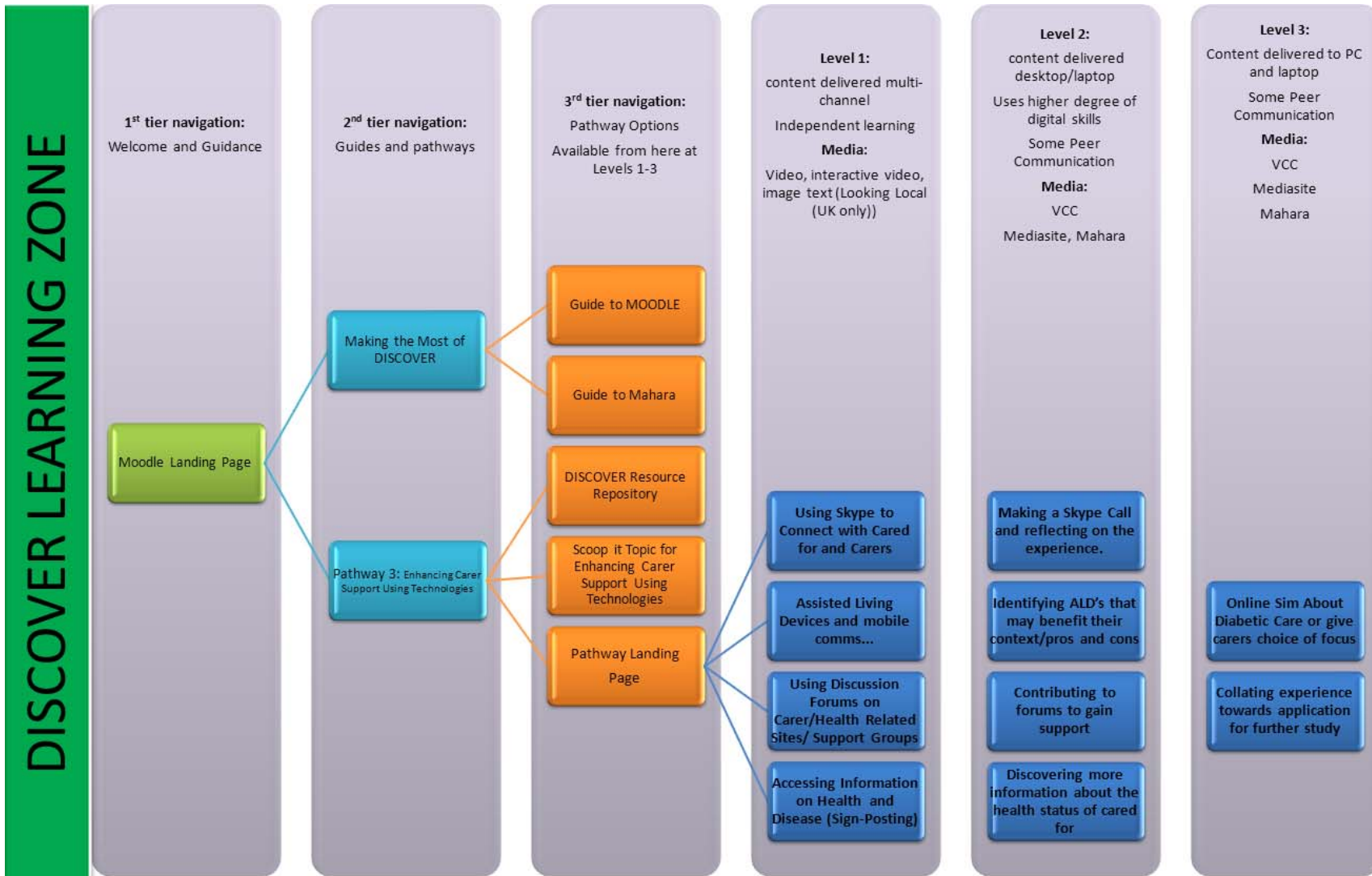


Figure 4: Pathway 2: Employability Skills

Appendix 3: DISCOVER MOODLE Schema: Showing Details of Pathway Three - Enhancing Carer Support Using Technologies

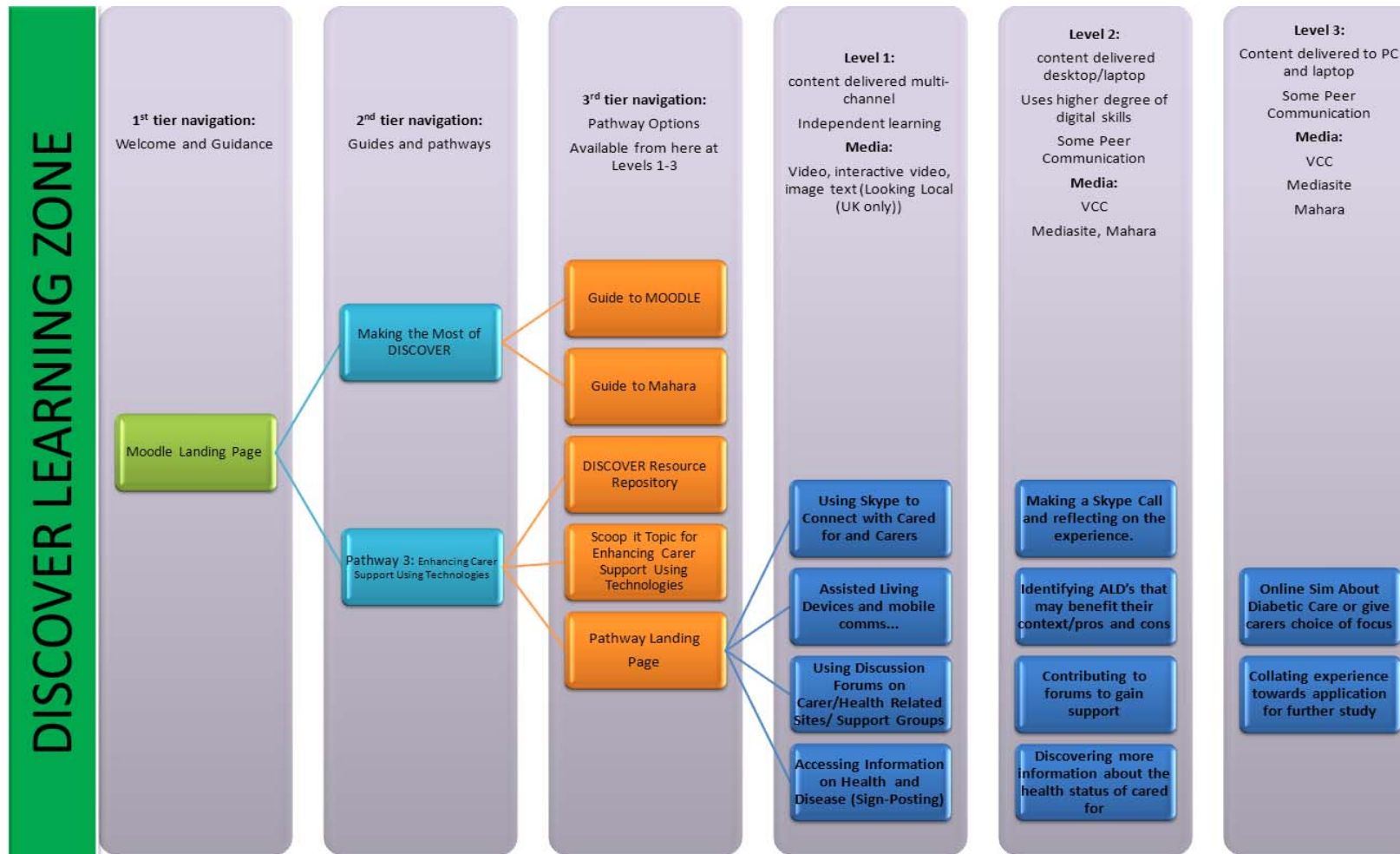


Figure 5: Pathway 3: Enhancing Carer Support Using Technology

Appendix 4

Report: Identifying carers' needs to inform DISCOVER

Focus Groups

This summary is currently based on the findings from 3 focus groups undertaken in Birmingham, UK but the intention is to enrich this summary with the findings from the focus groups that will be held in the test bed sites.

The aim of the focus groups was to elicit the carers' perspectives on

- Their caring situation
- Their use of digital technologies
- Their level of digital skills
- The value of technologies in assisting carers
- The use of technologies to improve the quality of life of carers and the people they care for
- The specific digital skills they would like to acquire
- The skills/information they feel would assist them in their caring roles/future employment

Desk research was also undertaken and the findings from the focus groups and desk research will be reported under each of the above headings.

Caring situation

Participants in the focus groups were either caring for some-one currently or had been a carer previously. There were no restrictions on the age of the carer or the cared-for person, or on the carers' specific caring roles and both formal and informal carers participated in the focus groups although formal carers were in the minority. In total, 40 carers, spanning the age range from young to older adults, participated in the focus groups.

The caring situations of the informal carers ranged from: fairly minimal care for a relative or friend who did not live with them to demanding and challenging care for a co-resident with a life threatening condition. The people they cared for were living with a variety of physical and mental long term health conditions and, depending on the level of care required by the cared-for person, carers' paid employment spanned the complete spectrum from full-time to limited part-time working with some carers currently unable to work. Formal carers similarly cared for people with a range of conditions and levels of need.

Use of digital technologies

The most commonly owned digital technologies were desk top and lap top PCs and no participant owned a tablet computer, such as a Samsung or an iPad. Some carers, who did not own their own PC, were able to use public computers in Libraries, internet café's and Carers centres, although their access to PCs in the local Carers' Centre had been terminated recently. A few carers had digital TVs, and a minority had smart phones, although most of them owned a mobile phone, primarily to keep in touch with the cared-for person/people. Few were familiar with gaming technologies such as Wiis, xBoxes or playstations.

Level of digital skills

Some carers were totally unfamiliar with PC s, digiTVs and smart phones. Those who used PCs generally used them for email and to write letters, although not everyone had internet access at home. None of the participants used their digiTVs to access the internet and only one carer accessed the internet via their mobile phone. One participant used their PC to download music. Some participants have attended free courses to learn how to use a PC but there is no back up to help you when you are using your PC at home.

Value of technologies in assisting carers

Carers with access to a PC felt the internet was a useful source of general information e.g being able to compare costs of car insurance. Other used it in their carrying role to find out more about the cared-for person's health condition, although other carers relied on Age UK or leaflets at their GP surgery for this . Some carers regularly asked friends or family members to look things up on the internet for them. Some carers Most carers did not want to engage with online shopping or internet banking because they were concerned about privacy, identify theft and fraudulent use of their credit cards.

Use of technologies to improve the quality of life of carers and the people they care for

Participants felt that the opportunity to talk to other carers online through online communities would be welcomed by many carers. Apparently in Birmingham about 5 years ago there was a f2f support group for male carers – and those participants that used to belong to the group would find an online version useful.

Broadly speaking, these participants would welcome anything that would help the people they care for, such as new skills they could pass on, but also online activities that could stimulate and entertain cared-for individuals who have become house-bound or spend long periods on their own.

Some carers felt using technology was wasting valuable time that could be spent more constructively and others felt there was no time to sit and use PCs as all their time is taken by their caring role.

Some new applications of technologies were discussed and carers thought the following could be useful:

- Smart phones/ wristbands – to locate people with dementia, who tend to wander, or to enable cared-for person to call for help
- Talking clocks – to remind cared-for person to take their medication
- Telehealth Care – although they would like more information about this.

Specific digital skills they would like to acquire

Participants described how they had difficulties in downloading software to do what they want to e.g. they cannot download Open Office so they can't type letters. Also they would like to know how to block off inappropriate messages (SPAM) as they clog up their email, also some of the messages are offensive.

Desk-based research

Several organisations offer courses in basic computing skills but the more dedicated courses are focussed on deeper IT skills than carers probably require. The most useful checklist for digital skills acquisition may come from the Get Connected Investment Project which aimed to enable care providers to improve access for service users, carers, visitors and staff to ICT so they can use the power of the internet to communicate, learn and train. The project found:

Service users used PCs to

- communicate with their friends and family through email and Skype
- connect with the wider world e.g. watch graduation ceremony via video streaming
- better manage care needs
- access online services such as shopping and banking
- find out information
- play games

- listen to the radio and watch television programmes via the internet
- take and view photographs and videos

Staff used PCs to

- support staff learning, training and development:
- plan activities with and for service users e.g. reminiscence work;
- develop and maintain care plans with residents.
- Manage other organisational activities

Skills/information they feel would assist them in their caring roles/future employment

Participants would like to have more information about the health conditions of the people they care for. Also, there was great interest in developing employability skills such as CV writing, role playing interview techniques, matching your skills to job applications and writing covering letters.

Desk-based research

Several care agencies are running their own courses for carers and a two-year project was undertaken by the Scottish Government to develop a carers' toolkit. Helping carers back to work is a priority for the Scottish Government and they identified a range of skills that they believe carers' acquire through their caring role for instance:

- Knowledge of the effects of specific disabilities and illnesses
- Experience of providing personal care – washing/dressing/assistance with toileting
- Moving and handling skills
- Management of medication
- How the Health Service works – and the particular roles of different professionals within it
- Assistance with therapeutic regimes
- Enabling independence
- Providing for particular dietary needs
- Managing and using equipment – e.g. wheelchairs, hoists, bath aids
- Specialist communication skills – e.g. sign languages or communication with dysphasic patients
- General communication skills
- Assertiveness (in negotiating with different professionals and service providers)
- Complex management skills

They identified that when caring ends some Carers' might wish to look for work in an environment where they felt they had some existing skills. Those who are still actively caring may also wish to consider working in the Health Service. Therefore accreditation of these skills through our materials will be very valuable. They also acknowledged that some Carers would prefer assistance to pursue careers other than caring, either rejoining their original profession to retraining.

The following list encompasses the range of courses typically on offer from caring agencies for their staff development.

- Adult Abuse, prevention of
- **Challenging Behaviour Courses**
- **Communication and Record Keeping Course**
- **Confidentiality Awareness Course**
- Contenance Promotion
- CoSHH (Substances Hazardous to Health)
- **Dementia Awareness Training Courses**
- Develop As A Worker
- **Equality and Diversity Awareness Course**
- Effective teamwork
- Fire Training
- First Aid Awareness
- **Food Safety Awareness Course**
- **Health and Safety Awareness Course**
- **Infection Control Awareness Course**
- **Loss and Bereavement Awareness Course**
- **Medication Awareness Courses**
- **Mental Capacity Act and Deprivation of Liberties Courses**
- **Moving and Handling of People Courses.**
- **Nutrition Awareness Course**
- **Observation Skills for Carers Course**
- **Palliative Care Awareness Course**
- Person Centred Care
- **Person Centred Care Courses**
- Principles of Care
- **Risk Assessment Course -.**
- Role of the Care Worker
- **Safeguarding vulnerable adults Awareness Course**
- **Stress Awareness Course.**
- **Stroke Awareness Course**
- Success with Learning Difficulties
- Supervision and Appraisal
- **The Ageing Process Course**
- Train the Trainer
- Understand Your Organisation
- Understanding autism
- **Wound Assessment Course**

Informal carers tend to be offered a subset of these courses for example:

- Long-term conditions
- Dementia
- Personal and practical care

- Health and social care services
- Equipment and adaptations
- Finance and benefits
- Carers and employment
- Older carers
- Parent carers
- Food and diet
- Emotional support and relationships
- Exercise and leisure activities
- Social and learning activities
- End of life issues

Conclusion

The focus groups revealed that these informal carers may not be aware of the possibilities that digital inclusion could bring, but were excited by the ideas that were suggested to them. Recent project have shown that when offered training in digital skills, carers and the people they care for engaged with the technologies, using them for them for a variety of purposes to support their well-being or professional needs. There are a number of training courses available for both informal and formal carers, ranging from a few hours to in-depth training over a longer period, but few focus specifically on digital skills. However, it is clear that, in addition to acquiring digital skills, the participants in the focus groups also wish to acquire caring and employability skills.

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