

Exploring the Feasibility of Developing Internet Based Health Promotion Materials for Third Level Students

Report

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September 2008

Acknowledgements

The Research Team would like to acknowledge the assistance and support of all those who participated in this research in particular Ms. Cindy Dring (NUIG) alongside the following:

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All the students from NUIG, UCC and TCD who participated in data collection.

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Mr. Aidan Healy – Welfare Officer (UCC).

Mr. Paul Killoran – Starlight Solutions

Mr. Michael Nowlan – Consultant on the Mental Health Portal Project.

Mr. Derek Chambers – HSE National Office for Suicide Prevention.

Mr. Ruairí McKiernan – Founder and CEO of SpunOut.

Ms. Anna Lally – Editor of SpunOut

Mr. Ben Clonny – HSE.

Mr. Douglas Van Sickle - e-CHUG Project Director (San Diego State University USA).

Mrs. Gertie Raftery – Counseling Department (Dundalk IT).

Mrs. Bea Gavin – Counseling Department (NUIG).

Mr. Eamonn Ó Dochartaigh – Counseling Department (NUIG).

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Executive Summary

Background

This is the first phase of a joint initiative between the Health Service Executive, University College Cork (UCC), Trinity College, Dublin (TCD) and NUI Galway (NUIG). It is a nine month research study exploring the feasibility of the development of internet based health promotion materials for Irish third level students, with a particular focus on alcohol use. To achieve this aim, the study was divided into four components; a brief review of the literature, qualitative research to assess both the perspectives of students and university personnel, specifically computer services and recommendations for future development.

The CLAN Survey highlighted the range of health issues that affect third level students and at the fore were alcohol misuse, mental health and sexual health (Hope, Dring, & Dring, 2005). Exercise, nutrition, alcohol and other drugs, and sexual health have been identified as health concerns for college populations (American College Health Association, 2002). Colleges, as key settings for health promotion, have the communication network and the infrastructure to take steps towards alleviating some of these issues and the utilisation of this framework offers a real opportunity to disseminate effective health promoting information to a high risk population.

A recent study by the HRB found that the 18-29 year age group reported use of the internet significantly more than any other age group, while males used the internet more than females (Gallagher, Tedstone, Moran & O'Doherty, 2008). This illustrates how the internet, as a health promoting tool, can reach young people and particularly young men. Recent evidence suggests that this cohort is now turning to the internet as a foremost means of accessing health information (Morgan et al., 2008).

The internet offers a range of advantages as a source of health information in comparison to traditional "offline" methods. One of the biggest advantages is the potential for interactivity, which can also facilitate tailoring of messages to individuals (Robinson *et al.*, 1998; Eng & Gustafson, 1999). This allows internet users the flexibility

to select websites, links and specific messages based on knowledge, educational or language level, need, and preferences for format and learning style (Pereira & Bruera, 1998).

There are also many dangers associated with using the internet as a resource for health information, most prominently in the areas of accuracy and reliability. Many websites seek to provide health information, however health seekers need to be aware not all sources are credible. Some act out of commercial self interest, an aspect that may not be evident to the user.

This perceived potential harm for misleading or inaccurate health information has resulted in many organisations creating, publishing and implementing criteria for evaluating the quality of health information (Adelhard and Obst 1999; Kim et al 1999). Using these criteria an internet search was undertaken to review health information provision on the web. Results indicated that there is an immense variety of health websites available for users, though there were credibility issues with many of them. There also appeared to be a gap in health information provision specifically targeting young adults.

This proposed desktop resource would be ideally placed to address these concerns, as the involvement of the HSE and the colleges would confer credibility upon the project. In addition a number of evidence based alcohol programmes for third level students were reviewed. These websites and programmes were assessed with key points extracted for the purpose of best informing future development of this proposed project.

Students Perspectives

The second part of this study was to assess student perspectives on the development of internet-based health resources. Six focus groups, two per university (one male, one female) were conducted, with forty nine students recruited through convenience sampling. The focus groups were audio-recorded with consent, transcribed and analysed using Nvivo 7 (QSR International, 2006). Results indicate that students use the internet, specifically the Google search engine, to find health information. However they also expressed a sense of mistrust with this. This led them to respond positively to the

development of a health information resource by credible and reliable organisations such as the HSE and the universities.

They identified that any such resource should be professionally presented, displayed in a concise manner and consist of many interactive features. It should also ensure anonymity to students, be heavily advertised and be accessed via university homepages and desktop icons. Students outlined that they would like the content to be professionally written by experts to ensure credibility and that the content should take a harm-reduction approach.

Topics identified to be addressed included; service provision within the colleges and local area, alcohol, drugs, sexual health, mental health and nutrition. Overall, students responded positively to the idea and the results suggest that an appropriately developed internet based resource for health information is likely to be used by college students.

Technological Perspectives

Exploratory qualitative research was also carried out to assess the feasibility of developing an internet based resource for students from a university's perspective. Key personnel within computer and web services were identified in each of the three colleges and asked to attend a joint computer services meeting to discuss the technical options and implications of developing such a resource.

Several provisional requirements were developed for this proposed online health resource, based on the focus group studies that had previously been conducted and the directions as laid out by the steering group. These included (i) content - local information specific to each college and generic health content which would be identical and shared across the colleges, (ii) authentication – some generic content may need to be restricted from full public access, (iii) access to the website - via a desktop icon and/or links off the college homepages, (iv) branding – leveraging the colleges' and HSE branding to ensure credibility (v) management – allowing multiple users (if required) to easily and quickly update/edit content (vi) high Google search optimisation (vii) evaluation – built in to determine efficiency of resource (viii) interactivity potential.

Some of the biggest issues highlighted by computer services were with regard to the sharing of information. Currently there is no system in place for sharing information

across colleges - otherwise known as “*federated access*”. This precipitated the discussion of hosting options, three of which were discussed. The first option, that one of the colleges hosted the information, was rejected due to branding implications. External hosting, for example within the HSE infrastructure, was suggested. This option would involve extra security implications. The third option was to pay for independent hosting. Computer services identified four requirements if external hosting is used – those being the readability, portability, ease of access and security of the information.

Other aspects which were the subject of discussion included authentication, which created a trade off situation. Increased authentication would offer much more scope for personalised content and interactivity, however it would create extra steps for students to take before the information could be accessed, while it would also move away from the goal of anonymity, which the focus groups studies suggested was of high importance to the students. The project would also be required to offer a degree of flexibility to incorporate browsers using mobile web devices and also the ability to integrate any other third level institutions who might wish to join the project at a later stage.

While many of these requirements and issues were discussed from a technical point of view, none were seen as so significant that they would form a barrier to the project reaching the next phase. Thus many technical options were outlined for future development of the project and the implications of those options.

Recommendations

Some of the key recommendations outlined above by students included:

- The website and content should be professional in order to ensure credibility.
- A harm reduction approach should be used.
- Website needs to be interactive whilst facilitating anonymity and confidentiality.
- Website should have a high search engine optimisation.
- Access points to the website should include a desktop icon and links from the college websites.

Some of the key technical recommendations outlined above by IT services included:

- Due to federated access issues - external hosting is required and should be secured.
- The technical requirements outlined in this report should be progressed.

- The issue of authentication and desktop access needs further investigation.
- The website should be developed to facilitate other mobile web devices.
- Advanced planning and an overall formal approach is required for future development.

Project Progression

- Secure funding.
- Appoint steering group committee.
- Appoint a project manager to oversee the overall project, taking account of time, budget and scope constraints.
- Develop a long term plan outlining aims and objectives, roles and responsibilities a realistic timeframe etc.

Phase Two of the Project

- Source/develop the content and features for the website.
- Develop the information architecture/sitemap and establish both outward and inward links with other useful and informative websites.
- Tender for external web developers and designers whilst adhering to all relevant procurement guidelines.
- Engage all the service providers (web developers, graphic designers etc.) that would take the project from planning to execution stage.
- Develop a product specification report, outline what is to be delivered, on what timescale and in what fashion.
- Develop the websites, databases and branding for the project.
- Pilot and evaluate website.
- Provide training for management of the website.
- Develop management guidelines, editorial policies, evaluation methodologies and a promotional strategy.

Introduction

Third level institutions are not only centres of academic achievement but are also places where students develop personally and socially (Abercrombie, Gatrell & Thomas, 1998). The provision of easily accessible, up-to-date, accurate and relevant information about health issues and available services is crucial to better support students and to foster a health-promoting environment on campus. The College Lifestyle and Attitudinal National (CLAN) Survey recommends that priority should be given to mental health promotion and reducing alcohol-related harm (Hope, Dring, & Dring, 2005).

The Health Promotion Unit and the Local and Regional Health Promotion Departments have identified the need to target higher education institutions for many years. To this end third level colleges have been identified as key settings for health promotion. "*Health is created and lived by people within the settings of their everyday life; where they learn, work, play and love*" (WHO, 1986).

In a large, busy, and complex organisation such as a college, computer-based health initiatives, available to all students through the campus computer facilities and services, are an obvious route for communication. Computer-based technologies not only convey information similar to traditional mass media, but they also have the potential to be interactive and to facilitate the tailoring of information towards individuals, thus making them a dynamic tool for health promotion. In addition, they enable the use of video, sound, image and text in various combinations, extending the ability to reach people of different backgrounds and with varying levels of experience. They also offer a potential avenue to reaching young men, who are less likely to use the health services than young women (Hope, Dring, & Dring, 2005).

These factors lead to representatives from the health services of University College, Cork, Trinity College, Dublin, and NUI, Galway to come together to discuss possible ways of sharing student-oriented computer-based health resources with a particular focus on alcohol. In addition there was some interest in exploring the option of a student desktop health resource, similar to an initiative carried out in Scottish universities in 2003

entitled "*Healthbits*". Healthbits is an online resource, which delivers health information straight to the desktops of student computers in Scottish universities and colleges. Access is secured through a graphic icon on the desktop (Douglas, Brindle, Fearn & Teijlingen, 2003).

Study Aims and Objectives

The main aim of this research study was to explore the feasibility of the development of internet based health promotion materials for third level students with a particular focus on alcohol use across third level institutions, specifically University College Cork (UCC), Trinity College, Dublin (TCD) and NUI Galway (NUIG).

To meet this aim, the objectives of the research were to:

- Review the literature in relation to the dissemination of health information via the internet to third level students with a particular focus on alcohol use.
- Review internet health promotion programmes with particular attention to those providing information on alcohol use.
- Explore the willingness of students to utilise the resource and investigate desirable features for students.
- Assess the feasibility of the project with university personnel, especially computer services in UCC, TCD, and NUIG.
- Produce a report and draft a clear proposal for further developments.

Report Structure

This research represents three distinctly separate components of work carried out: The first part of this report provides a brief review of the research literature to inform the study's development and to provide a context for the subsequent sections. This is followed by a report on the qualitative research carried out to ascertain students' perspectives on the development of internet-based health resources. The third section outlines some of the technical options and implications for developing such a computer-based health resource for students from the universities perspectives, with particular focus on computer services. Finally, the report concludes with various recommendations and a road map for future development.

Context of Health Information Provision

This section is divided into four subsections. Section (A) outlines why colleges are key settings for health promotion and provides a brief overview of Irish students' health. In addition, internet use, online health seeking behaviour, advantages and disadvantages of the internet and criteria and tools for evaluating health information websites are explored. Section (B) presents the findings of a review which was undertaken with regard to current health information provision on the Internet according to published evaluation criteria. Websites and resources based on alcohol, drugs, sexual health, mental health, nutrition and travel health were examined. Key features and characteristics of these websites were also outlined.

Section (C) outlines a number of evidence based on-line health promotion programmes currently available on the internet. Programmes promoting safe alcohol use and targeted at student populations were examined. Section (D) compiles a list of supports and services that should be addressed in this proposed student desktop health resource.

Section (A)

Third Level Colleges as Settings for Health Promotion

The Ottawa Charter for Health Promotion outlined and instigated the practical implementation of the "settings approach" to health. "*Health is created and lived by people within the settings of their everyday life; where they learn, work, play and love*" (WHO, 1986). Third level colleges have been identified as key settings for health promotion. At a European level a framework for action by a European Network of Health Promoting Universities was developed (Tsouros et al, 1998). At a national level in Ireland references to promoting health at third level have been made in the National Health Promotion Strategy (2000) "*to facilitate the implementation of health education and health promotion programmes within the college setting*" (Department of Health and Children, 2000, p.47).

A number of advantages to this approach have been documented (Tsouros et al 1998). In summary these are; a commitment to health can be built into the organisational culture, structure and practices; student wellbeing can be promoted; health related knowledge and understanding can be developed, synthesised, and applied; future generations of decision makers are targeted; there is a responsibility and potential to facilitate healthy personal and social development; colleges have a crucial role in advocating and mediating for healthy and sustainable public policy.

Other advantages of colleges as priority settings for health promotion are; colleges have existing modes of communication and infrastructure to support the promotion of health and they provide access to a large population of young people, especially males who are less likely to come into contact with health services (Hope, Dring, & Dring, 2005). The principles and perspectives of a settings approach are outlined in Tsouros et al, (1998). These include a holistic and socio ecological understanding of health, focus on populations, policy and environments, equity and social justice, sustainability, community participation, enablement and empowerment, mediation and social systems.

It is in this context that it is envisaged that this proposed student health resource could encompass all the principles and perspectives of the settings approach. By colleges adapting a settings approach and improving student knowledge and skills regarding health, this will inevitably have a positive impact on the health of individuals, communities and society.

Health of Irish Third Level Students

Starting college is a time of excitement, change and stress for young adults, resulting in greater lifestyle control and freedom than ever before (Von Ah, Ebert, Ngamvitroj, Park & Kang, 2004). This sense of freedom can lead to students engaging in risky health behaviours including tobacco use, physical inactivity, unhealthy dietary practices and unsafe sex, each of which can have both immediate and long-term negative health implications (Von Ah et al., 2004). A health risk of particular concern with college students is excessive alcohol consumption. According to the World Health Organisation (WHO) alcohol is the leading risk factor for young people (WHO, 2002).

One of the most comprehensive studies of Irish students' health undertaken in recent years was the College Lifestyle and Attitudinal National (CLAN) Survey (Hope, Dring, & Dring, 2005). This questionnaire survey was conducted in twenty one third level colleges and provides the most comprehensive self reported data to date on the various elements of Irish students' overall health. The results of this survey highlighted some key health issues among students that are of great concern and show them as a vulnerable/high risk group in Irish society.

Some of the key findings from the CLAN survey:

The student population had a less optimistic view of their general health when compared to the 18-29 year age group in the SLÁN survey (Morgan, McGee, Watson, Perry, Barry & Shelley et al, 2008). Some of the main health issues highlighted were alcohol misuse, mental health and sexual health.

Alcohol

This survey showed alcohol as the second highest monthly expense for Irish students, exceeded only by accommodation, (Hope, Dring & Dring, 2005). When compared to the 18-29 age group in the Irish drinking pattern survey, the reported total alcohol consumption was higher among students (Ramstedt & Hope, 2005). Male students drank nearly twice as much as female students. The WHO have defined binge drinking as consuming more than six drinks in a single session. 44% percent of female students and 61% percent of male students reported at least weekly binge drinking with 76 out of every 100 drinking occasions ending in binge drinking for males and 60 for female students (Hope, Dring, & Dring, 2005). While binge drinking was highest among males, this rate of binge drinking among females students was almost twice that of similar age groups in the general population.

Irish students experience a high level of problems as a result of drinking with 62% of students regretting things said or done after drinking and 44% missing school or work days following drinking to excess (Hope, Dring, & Dring, 2005). Financial problems are also common with one in four male students and one in five female students experiencing financial problems as a result of their drinking. Students who were regular binge drinkers, defined as binge drinking at least weekly, were two to three times more likely to experience a range of adverse consequences as a result of their drinking in comparison to students who binged less frequently. These high levels of alcohol

consumption, the pattern of high risk drinking as the norm among college students and the extent of alcohol related harm are of great concern and need to be urgently addressed.

Mental Health

The majority of students rated their mental health as good/very good. However 4% perceived it as poor or very poor. There was strong evidence of poor coping responses to feelings of anxiety or depression, with over 55% of students stating they would sort it out alone, 35% would try to ignore it, one in ten would take drugs or get drunk and 6% would do nothing. Male students were more likely to engage in these poor coping strategies and were less likely to seek help. Young males have also been identified as a high risk group at risk of suicide (National Suicide Review Group, 2002).

Sexual health

The most common form of contraception used by students was condoms, followed by the pill. However 5% reported using withdrawal and 4% used nothing. In addition the majority of students used condoms to protect themselves against sexually transmitted infection but 3% of students used no protection at all.

Overall – these findings highlight the need for health promotion to be targeted at third level students. One of the recommendations from the CLAN report was that health promotion structures and frameworks should give priority to mental health promotion and reducing alcohol related harm. This proposed desktop health resource could be a way to facilitate this and address these health issues specific to Irish college students.

Sources of Health Information

There are many sources of health information and advice available to the public. Most people perceive doctors and other health care professionals as their main source of trustworthy health information (Pennbridge, Moya & Rodrigues, 1999). Research shows that women use GPs more than men. The recent SLÁN survey (Morgan et al., 2008) showed 80% of women attended the GP in comparison to 67% of males. In addition, the CLAN survey (Hope, Dring, & Dring, 2005) also revealed that twice as many female students used the college health unit as a source of health information. Other traditional sources of health information are the mass media including the internet.

Internet Use

Internet use in Ireland has been growing steadily in recent years, with the number of homes with internet connections rising from 45.1% of all households in 2005 to 48.7% in 2006. Internet use in Ireland has been rising across all age groups since June 2005 (CSO, 2006). A recent study by the HRB found that the 18-29 year age group reported use of the internet significantly more than any other age groups and males used the internet more than females (Gallagher, Tedstone, Moran & O'Doherty., 2008). Therefore, it is becoming more important to view the internet as a source of health information, especially for young men. A previous Irish study into help-seeking behaviour in young males proposed the internet as a possible mechanism for the promotion of health (Russell et al., 2004).

Online Health Seeking Behaviour

It is estimated that there are about 100,000 websites providing health information worldwide and that about 4.5% of all internet searches are for health related information, otherwise known as online health seeking behaviour (Morahan & Martin, 2004). Online health seeking behaviour has been defined as *“the search for and receipt of messages that help to reduce uncertainty regarding health status and construct a social and personal (cognitive) sense of health”* (Tardy & Hale, 1998 p.338).

Results from a Eurobarometer survey reported that 23.4% of Irish people used the internet as a source of health information, which was in line with the European average of 23% (Spadaro, 2003). In the 2002 SLÁN survey (Morgan et al., 2008), 12% of respondents reported that they had used the internet as a source of health information, with the highest usage among the 18-34 age group, thus highlighting that young people in particular are turning to the internet to get health information and advice (Klein & Wilson, 2003).

Research also demonstrates widespread use of the internet for health information among college students. In an American study 24% of students reported having received online health information (Kaiser Family Foundation, 2001). It also highlighted that the most common route to health information was through a search engine but only 17% stated they would trust this information, thus highlighting the benefits of developing a reliable online health resource for Irish students. Colleges are an ideal setting to promote

online health information as they provide students with free internet connections. This study also found that the majority of young people mostly go online from home.

Studies have shown that individuals who are better educated and of higher social class are more likely to use the internet as a source of health information than individuals of lower social class and education (Andreassen et al 2002). While in general young men use the internet the most, studies show that women aged 18-29 years (61.6%) are more likely to seek health information online than men (29.1%) (Gallagher et al, 2008).

Other differences in men and women's online health seeking patterns include:

- ❖ Women are likely to conduct internet searches focused on illness/symptoms as the most active health seekers.
- ❖ Men are more likely than women to allow internet information affect their decisions and are less concerned than women about the credibility of health information found online.
- ❖ Men's searches tend to focus on the prognosis and treatment of a disease and they are more inclined than women to use their newly found information when asking follow up questions to their GPs (Fox & Raine, 2000)

Health Topics Searched Online

Korp (2006) identified the most common topics included in health web sites were physical activity, good eating habits, weight control, smoking and drug and alcohol use. Other topics were stress, sex, sleeping habits, mental health, natural/alternative health, parenting, humour and beauty. The European Commission in 2005 (eUser, 2005) provided information on the type of health information that online health seekers were searching; 88.2% of Irish internet seekers searched a specific health issue, 49% searched for information on a healthy lifestyle and 38.4% searched for health services information. Exercise, nutrition, alcohol and other drugs, and sexual health have been identified as key health concerns for college population (American College Health Association, 2002).

In 2007 a needs assessment was conducted to determine what type of information should be included on a web resource for the mental health promotion of students in an Irish third level setting (Ryan, 2007). Students felt that the internet was their preferred

medium and that they would use this web resource, especially if confidentiality and anonymity were ensured. The biggest barrier identified by students for not using this resource was not being aware of it, emphasising that a health promotion resource of this kind would need to be advertised. They also stated that the resource should not focus on mental health but rather be a “healthy living” resource, specifically targeted at third level students in order to develop a sense of community and belonging among students.

In this study some of the main health topics students identified as being relevant to them included; sport/physical activities and facilities available in college/local area, emergency contact numbers, sexual health, depression, suicide, loneliness, bereavement, exam stress and techniques, bullying, anxiety, travel, personal safety, nutrition, road safety, alcohol, drugs, relationships, eating disorders, food safety, disability, time management and services and supports within the local community. Some of the services and support that should be included were the careers office, counseling, student services, student assistant fund, international office, clubs and societies, students union, peer mentors and other local support groups and services. In addition they felt that the website should not have too much content and should be regularly updated.

Features Used Online

Students also identified key features that they would like to see addressed on the web resource. Interactivity was one of the most important factors with over 80% of students indicating that they would like to be able to interact with the web resource. Some of the interactive features mentioned included frequently asked questions, suggestion box, feedback feature, opinion polls, quizzes, games questionnaires, links to useful articles and other websites; moderated forum, video/podcasts and Bebo access. Other features to aid user-friendly navigation and appearance were mentioned, such as a sitemap, usage of different languages and of bright colours (Ryan, 2007).

Advantages of the Internet

Potential for Interactivity

One of the biggest potential benefits of the internet is its capacity for interactivity. Steuer (1992) defined interactivity as the extent to which users can participate in modifying the form and content of a mediated environment in real time. It is this interactivity that makes

the internet a dynamic medium as it emphasises transactional rather than linear communication processes (Pereria and Bruera, 1998; McMillan, 1999). It also highlights the internet's advantage over traditional health communication media as it can offer more than just information provision.

Steuer (1992) reviewed some websites and identified nine dimensions of interactivity which included: delivery of message i.e., use of audio/ video, navigation, data entry and use, personalised content, entertainment, use of promotions, formation of relationships and time. Another aspect of interactivity that has great potential includes interactive programs which aim to change knowledge and /or attitudes and /or behaviour. A review of published papers about interactive programmes reveals that they tend to be single topic, e.g., alcohol, and that they have been used to target specific population groups such as third level students. Interactivity further promotes tailoring of messages and facilitates interpersonal interaction.

Tailoring of information to meet users needs

Interactive health communication offers the potential for more individually tailored messages in a variety of formats (Robinson *et al.*, 1998; Eng & Gustafson, 1999) especially in contrast to traditional sources of health information, such as print. Internet users can select websites, links and specific messages based on knowledge, educational or language level, need, and preferences for format and learning style, often at lower cost than conventional methods (Pereira & Bruera, 1998).

Potential to facilitate interpersonal interaction and social support

The Internet offers opportunities for users to interact interpersonally with health professionals and peers. Research indicates that health behaviour change typically results more from interpersonal interaction than mass communication (Piotrow *et al.*, 1997) thus the Internet may be used to promote health behaviour change.

Potential for Anonymity

Relative to face-to-face interaction, online interactive health communication offers potential anonymity (Robinson *et al.*, 1998). Anonymity of the user is beneficial as it allows people to seek health information and advice in private. This is especially important with regard to sensitive matters (Klein & Wilson 2003) and for stigmatized

illness such as mental health problems (Powell et al 2003), which the CLAN survey (Hope, Dring & Dring, 2005) identified as being a key issue for Irish students. A study conducted by Kummervold et al, (2002) found that 50% of their respondents discussed personal problems online that they would not feel comfortable discussing face-to-face with others.

Other Advantages

- The internet allows individuals privacy, immediacy, convenience, a wide variety of information and a number of different perspectives on the same topic (Skinner et al 2003, Fox & Raine 200; Bischoff and Keltley 1999).
- The Internet offers widespread dissemination of high volumes of health information (Eng and Gustafson, 1999; Gregory-Head, 1999; McKinley et al., 1999) across geographical boundaries that would otherwise be difficult if not impossible to obtain for no or little cost.
- It empowers users to seek help and increase understanding of their medical conditions (McMullan, 2006).

Despite these potential benefits of interactive health communication there are some limitations and issues. A review of Irish health websites resulted in them being judged as “disappointing”. The main issues identified included; unspecified target audience, poor design, lack of email contact, high readability level, lack of interactivity, little maintenance and out of date and static content (O Mahoney, 1999 p.334).

Disadvantages of the Internet

- Information overload can be a problem and overwhelm the reader. (La Perriere et al, 1998).
- Internet is disorganised (McKinley *et al.*, 1999).
- Lack of permanence – the internet is fluid rather than permanent as sites disappear, change or move without warning (Pereira & Bruera, 1998 p.62).

- Inconsistent updating means information may be out of date (Gallagher, 1999).
- Inaccessible: some websites are inaccessible due to design features such as navigation difficulties. Also, website accessibility issues continue to plague many with health impairments (Davis, 2002).
- Some health information on the internet uses jargon/highly technical language or can have a high reading level (McGrath, 1997).
- Extreme communities have been formed online such as “Pro Anna” or the pro anorexia movement, while the phenomenon of online suicide pacts have also had negative consequences (Bell, 2007).

The internet is characterised by uncontrolled and unmonitored publishing with little peer review (Pereira and Brera, 1998). This means that anyone can set up a health information website with whatever content they want and claim to be an expert. This lack of regulation of the internet and online health content is of great concern, especially with regard to the quality of information provided. According to Abehard and Obst, (1999) health information on the World Wide Web is incomplete, contradictory or based on insufficient scientific evidence (Abehard and Obst, 1999 p.75). In addition Craigie et al. (2002) state that experts’ ratings of health information on the internet displayed low levels of consensus.

This lack of sufficient regulation of online health content is one of the biggest issues with regard to using the internet as a source of health information. Accuracy and currency will vary across websites and health seekers may unknowingly access inaccurate, misleading or even dangerous information. Using such health information from the internet for decision making purposes without expert advice could potentially have a negative impact on users/public health (Giles, 2007). Credible Internet sources include journals, universities and recognised research centres, libraries, government agencies and professional Organisations (Silberg *et al.*, 1997; Lamp & Howard, 1999).

Evaluating Health Websites

The perceived potential harm for misleading or inaccurate health information has resulted in many organisations creating, publishing and implementing criteria for evaluating the quality of health information (Adelhard and Obst 1999; Kim et al 1999). Kim et al, (1999) reviewed all the published criteria for specifically evaluating health information on the internet (Kim et al, 1999). They identified 165 criteria from 29 evaluation tools and journal articles for health information on the internet. Of these 165 criteria, 80% were grouped into 12 specific criteria and 20% were grouped as miscellaneous. These 12 quality criteria emerged to be the most utilized in current evaluation of health information on the Internet.

The top twelve criteria identified for evaluating health information websites in order of importance:

- 1) Content of the website (includes quality, reliability, accuracy, scope, depth).
Credibility constitutes the 'premier criterion' for evaluating online health information (Rippen, 1999, p. 4).
- 2) Design and aesthetics (includes layout, interactivity, presentation, appeal, graphics, use of media).
- 3) Disclosure of authors, sponsors, and developers (includes identification of purpose, nature of organisation, sources of support, authorship, origin).
- 4) Currency of information (includes frequency of update, freshness, maintenance of site).
- 5) Authority of source (includes reputation of source, credibility, trustworthiness).
- 6) Ease of use (includes usability, navigability, and functionality).
- 7) Accessibility and availability (includes ease of access, fee for access, stability).
Note - it is important that any website developed is accessible to everyone, particularly those with health impairments. If this desktop health resource was to be developed it should ideally comply with all priority 1, 2, 3 guidelines from the World Wide Web Consortium (W3C) Web Content Accessibility Guidelines. For example all images should contain ALT tags to provide a description for those who cannot see them.
- 8) Links (includes quality of links, links to other sources).
- 9) Attribution and documentation (includes presentation of clear references, balanced evidence).

- 10) Intended audience (includes nature of intended users, appropriateness for intended users).
- 11) Contact addresses or feedback mechanism (includes availability of contact information, contact address).
- 12) User support (includes availability of support, documentation for users).

These results suggest that many authors agree on key criteria for evaluating health related websites, yet despite this relative consensus they have not been widely disseminated to the public nor are they a fail-safe method for assuring quality.

Various approaches to ensuring quality of health resources exist and include: accreditation, certification, rating systems and posting seals which indicate compliance with a set of quality standards (Eng, 2001). Currently there are no worldwide standards. One of the most widespread attempts to apply a code of conduct to online health information is HONcode which was developed by Health on the Net Foundation (Health on the Net Foundation, 1997). HONcode was developed to unite and standardise the reliability of material and health information on the World Wide Web. It incorporates most of the criteria identified by Kim et al, (1999) previously and promotes eight ethical standards for online health information. Websites that comply with the HON code contain the HON seal of approval logo (Health on the Net Foundation, 1997; Boyer, *et al.*, 1998).

Hon code standards for medical and health websites include:

- 1) Authoritative – indicate the qualifications of the authors.
- 2) Complimentary – information should support, not replace, the doctor patient relationship.
- 3) Privacy – respect the privacy and confidentiality of personal data submitted to the site by the visitor.
- 4) Attribution – cite the sources of published information, date health pages.
- 5) Justifiability – site must back up claims relating to benefits and performance
- 6) Transparency – accessible presentation, accurate email contact
- 7) Financial disclosure – identify funding sources.
- 8) Advertising policy – clearly distinguish advertising from editorial content.

(Health on the Net Foundation, 1997)

Section (B)

Review of Internet Health Information Provision

In order to review health information provision on the web, an internet search was undertaken to identify current websites and internet resources available to the public. There was a particular focus on alcohol alongside other key topics of concern to the student. This review took account of key criteria identified previously by (Kim et al, 1999) and the HONcode standards (Health on the Net Foundation, 1997).

From this review – three things were evident:

- 1) A search on any one of these topics produces hundreds of results. For example a google search of '*alcohol health information*' produced 7,020,000 results, while even narrowing the terms down to '*alcohol health information for young people*' 394,000 sites were presented for the user to review.
- 2) Upon reviewing some of these websites from the search results, it became apparent that a lot of websites are not credible as it is often not immediately apparent where the website has originated. There were lots of general terms used for authoritativeness such as "experts" with no additional information regarding who or what they were experts in. In addition, due to the internet being unregulated, the lack of regular updating of information and the existence of various different commercial agendas for sources' were clearly visible issues.
- 3) There was also an obvious gap of health information websites which were tailored specifically to young adults aged 18-25 years.

From this review of hundreds of health information websites, in the appendices (A -H) are exemplars of health websites that appear to be transparent and credible. It is envisaged that students may be signposted to these resources in the future. Also we have outlined some of the key features and characteristics of these websites, which may be incorporated into this proposed student desktop health resource. Websites are often localised to suit the country/region they are based in. Therefore we have tried to prioritise Irish websites as they are deemed the most beneficial to users due to their signposting to national and local support services and organisations and the type of language used.

Section C

Review of On-line Health Promotion/Alcohol Programmes

An emerging area of health information on the internet is the delivery of interactive computer administered prevention programs. Due to alcohol being a persistent problem in colleges, many of these interventions on the internet specifically address college students' drinking behaviour. Research shows that knowledge based educational programs alone are not likely to lead to behaviour change. While they may improve students' knowledge about alcohol, in general they do not appear to significantly reduce levels of alcohol consumption (NIAAA, 2002, Larmier & Cronce, 2002, Walters and Bennett, 2000).

Therefore researchers and practitioners are now looking towards personalised interventions that incorporate motivational interviewing and social norms feedback (Miller & Rollnik, 2002). Typically these programs include both educational components regarding alcohol and its effects, as well as personalised feedback regarding the students' self-reported drinking behaviour. Strong evidence of the efficacy of program formats such as individual brief screening and feedback for heavy college drinkers has been found (LaBrie et al., 2006; Lewis & Neighbors, 2006).

We have identified some of the most widely disseminated online alcohol prevention programmes and provided a description of what they entail and their evidence base. It is envisaged that some of these programs may be tailored to Irish students and used on this proposed student resource in the future. The majority of these programs are developed in the USA and usually students are mandated to undertake these programs, in one of four ways. These are (a) at population level i.e. all first year students are mandated to take the program (b) campus judicial officers can sanction students involved in judicial incidents to take the program (c) counselling and health professionals can prescribe participation as part of their assessment and treatment programs and (d) they can be used as an outreach tool for high risk groups such as fraternities and sororities. A potential difference between American and Irish colleges is the culture of mandating students to undertake programs.

AlcoholEdu www.alcoholedu.com

Developed: This programme was developed by Outside the Classroom inc., a private company in Boston with no apparent affiliation with the alcohol industry. AlcoholEdu for colleges was set up in 2000. It has just released its 9th version of the programme.

Scope: Currently AlcoholEdu is being offered in approximately 550 American colleges reaching over 450,000, mostly first year, students.

Description: AlcoholEdu is an alcohol abuse prevention programme delivered through an interactive web based format. Its aim is to reduce the harm associated with student alcohol abuse. It is designed for population level i.e. for all students across a broad spectrum of abstinence, light to moderate to frequent heavy drinkers. Therefore it is based on elements from a number of behaviour change theories. At the start of the AlcoholEdu program, participants complete three attitude- and behaviour-based surveys (a) a 36-question pre-survey, (b) an immediate post-survey, and (c) a 21-question follow-up survey done 4 to 6 weeks after completing the program. Based on the pre survey answers the content of the programme is then tailored to the individual based on self described consumption and gender of each student.

Programme content: The programme takes 2.5 – 3 hours to complete. Following the pre-survey, students complete a pre-course introduction and five linear online learning chapters, a journal and two knowledge tests. Chapters 1 and 3 address alcohol expectancies as related to peer influence, advertising, and behavioural and legal consequences of excessive use. Chapters 2 and 4 introduce students to the concepts of blood alcohol concentration and the physiological parameters of alcohol use. The final chapter presents ideas of self-efficacy as related to safe and responsible drinking.

Evidence Base: Outside The Classroom carry out various research studies showing the benefits of the program, which are available on www.outsidetheclassroom.com. However it has recently been independently evaluated (Wall, 2007). This independent evaluation used a clustered, randomly assigned post-test only evaluation design with 20,150 individuals to examine differences between individuals who have and have not yet

received the educational program. The results indicate that an interactive educational experience can substantially reduce the negative consequences of high risk drinking.

Some of the key findings showed that in terms of likely attitude and behaviour change from this online health behaviour change tool - the intervention group participants self-reported fewer negative consequences, incidents of heavy drinking, and risky behaviour than a comparison group. Additionally, the intervention group expressed more disagreement with positive expectations of alcohol use than the comparison group. For a full report of findings and limitation of this research see (Wall, 2007).

MyStudentBody www.mystudentbody.com

Developed: This program was developed in 2002 by Inflexion Inc and with support/funding from the National Institute of Health.

Scope: It is currently in use in approximately 100 colleges in America.

Description: The Mystudentbody website covers many topics including stress management, tobacco use, nutrition and fitness, sexually transmitted diseases and alcohol and drugs. For each of these topics there are also interactive interventions and programs. Mystudentbody (Alcohol) is an interactive online alcohol programme. It was developed to provide students with tailored motivational feedback about high-risk drinking and to promote responsible drinking among college students. This program is targeted at the general student population; it includes both primary (e.g. general information, drinking-related risks, helping fellow students who drink too much) and secondary (e.g. Rate Myself) prevention elements. It takes approximately 45-60 minutes to complete.

Programme Content: At the core of myStudentBody is a self-administered risk assessment (called Rate Myself) which functions as a brief intervention or screening tool. It requires students to complete four sets of questions: (1) beliefs regarding alcohol; (2) lifestyle issues (3) the risks they take when they drink (e.g. sexual risk-taking) and (4) the consequences they suffer as a result of drinking (e.g. poor grades). Immediately students receive tailored motivational feedback based on gender and self reported

alcohol consumption. After completing the risk assessment, students progress to the course content section of the website, which is tailored to individual students based on their risk assessment responses.

Evidence Base: There has been no independent research study conducted to show the efficacy of this program to date. The research study outlined below was conducted by Inflexion Inc. Chiauzzi et al. (2005) carried out a study to investigate the efficacy of this online interactive alcohol program. A randomized, controlled clinical trial was conducted to compare the MyStudentBody program with an alcohol education text based Web site at baseline, post intervention, and 3-month follow-up. Results indicate that MyStudentBody was viewed more favourably and tended to lead to less drinking compared with other anti-drinking websites. Some of the key findings included; the number of binge drinking episodes, typical drinking amounts and frequency, and the quantity of alcohol consumed on special occasions all decreased over the study period. Also the study demonstrated that the program had significant effects on women, persistent heavy drinkers and low motivation students.

e-CHUG (electronic – Check- Up to Go) www.e-chug.com

Developed by: counsellors and psychologists at San Diego State University, USA.

Scope: E-chug is currently in over 400 universities and colleges in the USA, Canada and Australia. Recently an Irish version of this programme was developed in Ireland for NUIG, entitled “E-pub”.

Description: The electronic-Check-Up to Go is the web-based version of the Check-Up to Go (CHUG) mailed feedback instrument (Walters, 2000; Walters, Bennett & Miller, 2000). It is an evidence-based online alcohol intervention and personalised feedback tool. It draws on motivational interviewing (Miller & Rollnick, 2002) and social norms feedback theories (Haines & Spear, 1996) and is designed to motivate individuals to assess their alcohol consumption using personalised information about their own drinking and risk factors, with the goal to reduce destructive drinking in college campuses.

Programme Content: This intervention takes students approximately 20-30 minutes to complete. The electronic Check-UP to Go (E-CHUG) combines a brief assessment with motivational feedback tailored to college students. Students undertake a brief assessment where they are asked a series of questions about their drinking, based on their personal responses they then receive personalised feedback in a variety of formats including video and audio on the following topics:

1. A quantity/frequency drinking summary (number of standard drinks consumed, peak blood alcohol level and calorie “cheeseburger” equivalent).
2. Comparison to local college drinking norms (the database is customised to each university thus allowing them to compare with students from their own campus).
3. Estimated level of risk (AUDIT score, genetic risk of alcoholism, tolerance)
4. Amount of money per year spent on alcohol
5. Cigarettes smoked per month
6. Explanation, advice and local referral information.

Evidence Base

There are many unpublished research studies carried out on the effectiveness of e-CHUG by various universities which all demonstrate significant reductions in alcohol consumption among college students completing the e-CHUG online intervention. (see www.e-chug.com for studies and findings). The research study entitled “*A controlled trial of web based feedback for heavy drinking college students*” is outlined below and is published in a peer reviewed journal (Walters et al., 2007). This study tested the efficacy of e-chug, an online alcohol intervention aimed at reducing drinking among a group of at risk college freshman.

The study was a randomised control trial with 106 participants randomly assigned to receive feedback (e-chug) or to an assessment only control group. The feedback group received a personalised feedback report immediately. At 8 and 16 weeks these students completed a follow up assessment. The control group received feedback after the 16 week assessment. Results demonstrated that at 8 weeks, the feedback group showed a significant decrease in drinks per week and peak Blood Alcohol Content over the control group. By 16 weeks, the control group also declined to a point where there were no differences between groups. This study shows preliminary support for the efficacy of this intervention at reducing short term drinking among at-risk students.

Another programme of significant relevance to this study includes:

Healthbits

Healthbits is a student desktop health resource in Scotland which is targeted at 17-24 year olds. It was developed by the NHS Health Scotland, along with Youth Media and Scottish Universities in 2003. It delivers health information straight to the desktops of student PCs in Scottish universities and colleges. It was developed using Scottish television advertisements and specifically designed creative pieces of web based multi-media. These images are delivered to student PC desktops through the college computer networks. Each image can then be clicked on and users will be linked to Health Scotland's website for further information and support. Access is facilitated via a graphic icon on the desktop. Topics covered on this resource included sexual health, positive mental health, smoking, alcohol and healthy eating.

An evaluation of this student desktop health resource was carried out to assess the effectiveness of Healthbits. Both qualitative and quantitative methods were employed with a sample of students across Scotland to determine students' perspectives and views about the method of delivery, content, tone relevance and accessibility of the resource (Douglas, Brindle, Fearn & Teijlingen, 2003). Results include the following:

Method of Delivery

Advantages of Healthbits

- Many students, especially females, thought computers were a good way to impart health information to students as they used them frequently.
- The Internet appeared to be the most popular option for sourcing health information, with GPs ranked fourth.
- Students preferred using government or university backed websites as they were deemed credible and trustworthy. Health Scotland was widely known, well recognised and regarded as a credible source of health information.

Disadvantages of Healthbits

- Most participants were unaware they could click on the Healthbits images for more information.

- Students did not like the way healthbits appeared on their desktop as a computer pop up, which they negatively associated with commercial advertising.
- The majority of students felt Healthbits should be placed on college homepages as they felt it would be more visible/credible and would also facilitate remote access to the resource.
- Some students stated that they only use college computers to check email or do college work and that a public place was not the most appropriate place to look up health issues.

Content

- Gaps identified in the content included illicit drugs, alcohol, exercise, information for new students and a focus on mental health at exam times.

Tone and Relevance

Healthbits was considered relevant by most participants, especially females, and overall students had a positive view of the resource.

Accessibility

- The majority of students did not appear to have any significant difficulties with gaining access to college networked computers.
- A lot of students accessed the internet remotely from colleges.

The evaluation concluded by stating that there was a high level of support amongst students for the idea of using college networked computers to communicate health information.

As part of this study, we spoke with an NHS representative regarding Healthbits. They also carried out a small evaluation in 2007 on Healthbits but their results were limited as the different colleges had little if any recollection of the project, which they felt was cause for concern. In addition it was felt that while this initiative may have been successful in 2003, technology has changed considerably since then and so caution should be exercised with such an approach in the future. The NHS are currently looking at other approaches, such as working closely with sites such as Bebo and Facebook to deliver health information to young people in Scotland.

Section (D)

Supports & Services that should be provided on this proposed Student Desktop Resource

Moving away from the comforts and familiar surroundings of home to attend third level college can be difficult for many students. Therefore it is important that this transition is made as easy as possible. One means of achieving this is to ensure students are provided with accurate and reliable information about the various issues that may affect their lives, with health being one of the most important.

However, merely providing information is not sufficient. Students need to be facilitated and empowered to take an active role in their own health and wellbeing. This can be achieved by having a comprehensive directory of the various types of health and other services available to students, both within the colleges and in the surrounding area, detailed on the proposed website in addition to the health information. It would be important that permission is sought from all services in advance, so that their details can be compiled in this format for students. A lot of this information exists already but it makes it easier for students to access if it is all in one place.

Here is a list of some of the health services that should be covered on the website.

Doctors - the Irish College of General Practitioners have a “find a GP service” for the public. However, it may not be very comprehensive as it only contains the names of GPs who have agreed to have their details listed, but it may be a starting point for compiling this section of the website in the future.

Nurses	Health Centres/units	Hospitals
Midwives	Physiotherapists	Chiropractors
Dentists	Orthodontists	Optometrists
Nutritionists	Dieticians	Psychologists
Psychiatrists	Chaplains	Counselors
Chiropodists/podiatrists		

- Support groups/organisations/clinics and services for all topics covered on the website, for example alcohol anonymous and family planning clinics etc.
- Alternative Health Therapies - such as acupuncture, aromatherapy, reflexology, reiki, yoga, meditation etc.
- List of pharmacies – in particular ones that are open late at night and offer student discounts.
- List of leisure services – taking account of costs and non-alcoholic activities.
- List of sports/recreational services - including sports clubs/exercise classes, sports facilities and also green spaces/parks and Slí na Sláinte walkways, as they are free.
- Additional college services – careers office, student services, international office, clubs and societies, students union, peer mentors, chaplains and disability services.
- Other useful services - hairdressers, book shops, beauty clinics, garages, post offices, banks, tax offices, travel agents, hostels, citizens information centres etc.

Additional information on these services that should be displayed:

- ❖ Opening times.
- ❖ Personnel details – photo/credentials for health services.
- ❖ Contact details [phone/email] & Address.
- ❖ Name and contact details for whom to contact outside of normal office hours.
- ❖ Links - where possible to their own websites.
- ❖ Lists of services offered and costs [student discount/free].
- ❖ Interactive map of the area with all the services locations tagged on it. This should also have a facility where students can type in where they are located and what service they want to get to in order to get directions to the service [similar to google maps]. SpunOut have recently launched a similar interactive feature on their website.

Students Perspectives on the Development of Internet Based Health Resources

Exploratory, qualitative research was carried out in order to determine the acceptability of an internet based approach to health information provision to students from each of the three participating universities (University College Cork (UCC), Trinity College, Dublin (TCD), National University of Ireland Galway (NUIG)) and to gauge students' willingness to utilise such a resource.

Method

Focus groups were chosen as the method of data collection. Six focus groups, two per university (one male/female) were conducted, with a total of forty nine students recruited through convenience sampling. Various societies/ clubs within each of the universities provided a feasible framework to recruit students. There were three criteria for recruiting participants: they had to be current registered students at one of the three participating universities, aged 18 years and over and a full time student (years 1-3 on contact programmes). No payment or incentives were offered to participants.

A focus group questioning route (see appendix K) was developed and piloted on a group of male and female students in NUIG. All the focus groups took place in rooms within each of the three participating universities. Each focus group was conducted separately and was approximately 45 minutes in duration. All participants were given a short information sheet at the start of each focus group (see appendix L) which outlined the rationale of the study and the procedure, as well as ensuring confidentiality and anonymity before verbal consent was sought. All the focus groups were audio- recorded with consent, transcribed and analysed using Nvivo.

Results

The questioning route of the focus groups provides the framework for the presentation of the results.

Accessibility

Where do you think students get their information regarding health matters?

The majority of students mentioned the internet as a source of health information, with the exception of the TCD Males. When asked what type of health information websites they accessed– only 3 websites were mentioned: *VHI* [TCD Females], *Fit for Life* [TCD Males] and *Bodywhys* [UCC Males]. Overall most students consistently stated that they use Google, with the exception of UCC Males. This was reflected in comments such as “*we just google it like you wouldn’t know any big name health information websites*” [TCD Males] and “*google tells you everything*” [UCC Females].

While Google was consistently mentioned as the main source for health information among the majority of the focus groups, **all** the students expressed a sense of mistrust with the information produced via a Google search, reflected in comments such as: “*In terms of mental health, if you google suicide - the first three hits might be where you could turn to for help if your depressed and the fourth hit could be how to do it – so it is not the most reliable way of getting information*” [NUIG Males].

Other sources of health information that were mentioned included:

- **Health centres** – females explained their difficulties with accessing health information here “*They have huge numbers of patients to deal with and they just don’t have the time. So if you have a question they don’t have time to answer it*” [NUIG Females].
- **On-line medical dictionary** Wikipedia was identified by the majority of males, with the exception of those of UCC.
- **Leaflets and flyers**
- **Parents**
- **Hospitals**
- **Pharmacies**

Content

What type of topics do you think students would like to see addressed on the website?

Services Available and Contact Details

Services available to students were mentioned by all the focus groups. This was reflected in comments such as *“I think services as well because it is one thing to say something and give two or three pages on it that you can read but also people need to follow up of - what I can do, like solutions, not just lots of information”* [UCC Males]. They also wanted to know the following:

What and where services are, in both the college and surrounding areas - *“Having things about local services is good for us moving away from home for college”* [UCC Females] and *“local contact details - college and local area”*.

What services were free to students and what *“services were available outside of working hours”* [UCC Females].

Get contact details for these services even while on the move - *“most people will soon be going around browsing the web on their mobile – so it would be handy to get contact information even in an emergency on the go on your mobile”*.

Specific services required that were discussed during the focus groups included:

- ***Dentists*** [NUIG Males/Females and TCD Males]
- ***Health Centre***, Doctors/ Nurses – only mentioned by females [TCD F & NUIG F].
- ***Counseling*** – was mentioned by all the male focus groups and NUIG Females.
- ***Chiropractors and Opticians*** [NUIG Males only]
- ***Nutrition /Dietitians*** [NUIG Males & UCC Females]
- ***Helpline numbers*** mentioned by the majority of females, except NUIG Females
- ***Physiotherapist*** and healthy eating restaurants [TCD Males only]
- ***Psychiatric and Mental Health Services*** [NUIG Males and UCC Females]
- ***Family Planning Clinics*** [UCC Females only] & ***Crisis Pregnancy*** [TCD Females]
- ***Sports Clubs*** [NUIG Females only].

Alcohol

The majority of the focus groups mentioned alcohol as a topic, with the exception of TCD Females. All the students explicitly stated that they would like:

Simple and practical information regarding alcohol and units - *“I think students would react a lot better to more simple kinda information - if you said you are allowed 14 drinks a week or 3 drinks on a night out instead of units”* [UCC Males]. NUIG & TCD Females also stated that they did not understand units *“this unit thing – what the hell is this I still don’t know what this is”* and *“how much you are meant to drink because I actually don’t understand”*.

A harm reduction approach - they would not like to be told *“not to drink alcohol”* but instead would like to know the health risks/effects of alcohol - *“not even warn people against alcohol - just say what the risks are”* [NUIG Males]. The effects/ risks mentioned included *“the effects of alcohol on your liver and brain, fertility and put on weight”* [TCD Females] and *“you have poorer concentration if you drink around exams”* [UCC Females].

Other points regarding alcohol that were briefly mentioned in the focus groups include:

- **Use of shock tactics** – NUIG Females and UCC Males felt that people needed to see the negative images of alcohol.
- **Lists of cheap non-alcoholic alternatives** [NUIG Males, TCD Females & UCC Males].
- **List the percentage of alcohol** and exactly what is in specific alcohol drinks rather than alcohol in general [TCD & UCC Males]
- **Hangover cures** [TCD & UCC Males].
- **Effects of mixing** alcohol drinks and smoking when drinking alcohol [UCC Male]
- **Safety tips** when drinking alcohol [UCC Females].

Nutrition and Diet

All the focus group mentioned nutrition and diet as a topic that they would like to see addressed on the website. This was reflected in comments such as *“healthy foods and diet”* [NUIG Males] and *“nutrition - the vast majority of students eat crap and don’t have a*

clue of proper nutrition, so maybe students could be better informed about this" [UCC Males].

The majority of the focus groups, with the exception of TCD Females, consistently discussed the cost of healthy eating as one of the biggest barriers to doing so among students and therefore it was generally acknowledged that students do not have a healthy diet. This was supported by comments such as *"students have a limited amount of money and students don't go out and buy the healthiest food - they'll buy the cheapest food"* [NUIG Females] and *"if you don't want to spend a lot of money you are looking at Burger king or something like that"* [TCD Males].

Specific nutrition information they would like to see addressed on the website included:

- ***Cheap and easy/healthy recipes*** - *"a lot of the time when you're living out on your own most students live off coke, noodles, and pasta so a resource of what else you could eat cheaply - easy to make and healthy would be good"* [TCD Males].
- ***Lists of healthy places to eat*** - *"tips about where to go - restaurants with healthy food at low prices"* [TCD Males] and *"what places have student discount as most places that offer this are for unhealthy places like Burger King"* [TCD Females].
- ***Information*** about what type of food is good - *"we all know what type of food is bad for us but what's good for us"* and what are the healthiest fast food options. [UCC Males].
- ***Exercise and diet*** [NUIG Females only].
- ***Food safety*** - such as how long can you store food, especially meat.
- ***Vegetarian Options*** - The majority of females with the exception of TCD females mentioned that they would like information on cheap/healthy vegetarian recipes and tips for how to be a healthy vegetarian.

Sexual Health

Sexual health was mentioned by the majority of focus groups, except NUIG Females, as a topic they would like to see addressed on the website - *"people are having unprotected*

sex so maybe sexual health information” [NUIG Males] and “sexual transmitted diseases are prevalent among students so maybe sexual health information” [UCC Males].

Specific sexual health information they wanted addressed on the website included:

- **Information** regarding what types of contraception are available - *“I think contraception is a very big thing and knowing the different types and forms of contraception- before as far as I was concerned the pill was the only form of contraception that there was”* [NUIG Females] and *“what are the most efficient forms and how much they cost for students”* [NUIG Females].
- **Lists of places** that give out free condoms and to know where family planning clinics are *“family planning clinics as well, as a lot of people don’t know where they are”* [UCC Females].
- **Cover legislation** regarding contraception *“recent pharmaceutical legislation has prevented the over the internet purchase of the pill – this affects students so they would need to know”* [UCC Males].

Drugs

Drugs were also mentioned as a topic that could be addressed on the website by the majority of the focus groups, except UCC Males. Similar to alcohol, participants expressed that they do not want to be told not to do something *“don’t do them doesn’t work with college students”* [NUIG Females] but instead would like to know the health risks/effects of drugs. This was supported with comments such as *“portray the effects it can have on your body - show the damage that drugs do on the brain”* [NUIG Males] and *“we want to know the long term effects of drugs - could show the effects if you take it every day or if you take it every month”* [UCC Females].

Specific information they wanted addressed on the website with regard to drugs includes:

- **Portray the criminal** side of where drugs come from *“information about where the drugs are coming from before they get to you - that would put a lot of people off -if you saw pictures of some kid in a poppy field picking the stuff or even lads swallowing it and coming over on a plane”* [NUIG Males].

- **Smoking** - “cover smoking or something like the health implications and costs” [UCC Females] and “a lot of people who smoke don’t actually know what’s in them so that would be important to cover” [NUIG Females].

Mental Health

Mental Health was mentioned briefly by all the focus groups and this was supported by comments such as “*mental health is a huge issue agreed especially in recent years than previously*” [UCC Males]. In addition NUIG Females and UCC Males felt it was an issue which was very prevalent in society “*it is more prevalent in society than previously*” and so felt that information on “*what to do for them would be good*”. Also NUIG Males felt that to address mental health and depression would be good, as “*most people won’t be asking their friends if they are feeling depressed and need help*”

Other Mental Health information they would like to see addressed on the website includes:

- **Depression** [NUIG Males/Females and UCC Females].
- **Attention Deficit Disorder and Bereavement** [NUIG Males only]
- **Suicide** [UCC Females only].

Additional Content

Students would also like to see the following addressed on this health resource:

- **First aid**, health myths and health warnings. [NUIG Females].
- **Mixing medication** and work life balance [NUIG Males].
- **Financial Advice** [UCC Males] and rights/entitlements such as PRSI contributions, employment rights, landlord rights and what students are entitled to [TCD Males and UCC Females].
- **Types of injuries** [NUIG Females & TCD Males]
- **Safety issues** - UCC Males and Females and NUIG Females highlighted how to plan a safe night out].
- **Allergic Reactions and asthma attacks** [NUIG Males/Females].
- **Have a fresher information page/link** – with information on how to get about the college and basic tips of how to survive moving away from home.
- **Dealing with exam stress** and eating disorders [NUIG Females].

- **Exercise and physical activity** – tips for incorporating exercise into daily life, benefits of physical activity and lists of places where people can be active such as walking routes, green areas and parks [UCC Males].
- **Travel Information** - information regarding travel vaccines, safety travel tips and how to deal with mosquito bites when away [NUIG Males & Females].

Key themes that emerged from the students with regard to content included:

- The need for **professionalism** i.e. content to be written and reviewed by professionals in order to be seen as credible health information, this was reflected in comments such as *“you need to have some figure of authority standing behind the information like a doctor or surgeon general so that it is professional and taken seriously by students”* [UCC Males].
- The content to be **trustworthy and reliable**, which was discussed in the majority of the focus groups except TCD Males. This was continuously reinforced through out all the discussions - *“Just so as that it is not just another website – make sure the information is trustworthy”* [NUIG Females] and *“It is important that it is reliable”* [UCC Females].
- Content style has to be **harm reduction** - *“In general “don’t do it” wont work, it needs to be - this is what it is doing to your body, this is why you should drink this and not that”* [NUIG Females] and *“It’s kinda like when you approach the take with drinking where they say don’t get drunk but if you are going out to get drunk - eat beforehand”* [UCC Males].
- **Targeting the content** was an issue highlighted by UCC Females and the majority of males, and was reflected in comments such as *“you need to take into account the students you are targeting which is primarily 18, 19, 20 year olds fresh out of home”* [UCC Males]. Also particular reference was made about targeting sexual health information - *“sexual health would have to be aimed at both guys and girls because the guy is in the same situation, even though it may be that the girl is pregnant”* [NUIG Males].

- The majority of the students also felt that it was important that the content be **informative and cover all topics** “*I think it is important to have a balance as everyone is going to view things differently so have the features to attract people and make it interesting, but have good information that’s the most important thing* [UCC Females] and “*should cover all topics not just focus on one*” [UCC Females].

Design

How do you think students would like this website and it’s content to be presented?

Specific features that should be included on the website:

- **Forum** – this was the most frequently mentioned feature and was reflected in comments such as “*definitely something like a forum would be good - where people could ask a question and it was responded to by a professional so that they knew it was the correct information and it was reliable*” [NUIG Males]. Other issues with regard to the use of forums:
- **Open for students to respond** to questions as well but this was rejected by the majority of the group with comments such as “*I don’t know would it be taken too seriously though*”. [TCD Males]
- **Monitored** - “*it should be previously viewed by a moderator so they are not just joke questions*” [NUIG Females]. In addition UCC Females mentioned that the issue of confidentiality should be emphasised; “*confidentiality is an important thing*”.
- **Anonymous** - “*you would need a forum with anonymity*” [NUIG Males] and “*forums I think would be good where you can have anonymous chats about different topics, people can learn stuff anonymously as alot of people don’t want to do face to face unless it with friends*” [TCD Females].

- **Video/Podcasts** - TCD Males/Females, UCC Females and NUIG Males felt that videos/podcasts could be used to tell personal stories, should contain young people and portray different scenarios.

Additional features identified:

- **Diary for Depression**, diagram paths and feedback/suggestion button [UCC Females only].
- **Audio Clips** [TCD Females only]
- **On-line appointments with the doctors** [NUIG Females and TCD Males].
- **Box/Recent news** section [NUIG Males only]
- **Search facility** on the website [NUIG Females, TCD Males and UCC Females].
- **Symptom Checker** – type in what’s wrong [TCD Females/Males & NUIG Females].
- **Competitions** to entice people onto the website [NUIG & TCD Males only].
- **Case Studies** – more interesting than just reading paragraphs [NUIG Males & TCD Females].
- **Frequently asked questions** at the end of each topic [NUIG & TCD Females only]
- **Colourful pictures** as a way to present information [NUIG Females, TCD Males/Females and UCC Males].
- **Personal stories** section- about students and famous people [NUIG Males, TCD & UCC Females].
- **Quizzes** – [NUIG Females/Males, TCD Males and UCC Females].
- **Questionnaires** – [TCD Females/Males and UCC Females].
- **Games** [NUIG & TCD Males]

Key Themes that emerged from the students with regard to how the content on the website should be presented:

- Content needs to be presented in the **shortest possible way** and this was reflected in comments such as *“if it’s not short and quick you could go down and wait in the doctor’s surgery”* [UCC Females] and *“we don’t want a big long list of paragraphs going on and on - where you have to look through and find what you are looking for”* [UCC Males].

To do this the following suggestion was made:

- **Links** - *“links to other websites at the end of every topic”* [TCD Males] and *“you don’t want all the information on the page – needs to be short and then link for more information”* [UCC Males] and *“have links for further information rather than going onto google”* [NUIG M].
- **Bullet points/ Quick facts** – were mentioned by the majority of the focus groups with the exception of NUIG Males and TCD Females.
- **Using headings** - as a way to present information and entice students to read the content *“unless it has a catchy heading people won’t read it”*. [TCD Females].

- Presented in a **professional way** and this was reflected in comments such as *“look as professional as possible because if you are looking up Chlamydia the last thing you want to see is Mickey Mouse to appear on your screen”* [NUIG Males].

- Use **informal language** that is professional but not too serious or childish. This was supported by the following comments *“informal and relaxed language”* [NUIG Females] and *“if you come on too strong/serious people get scared compare to if you do it in a more relaxed form it would be more susceptible to students”* [TCD Males] and *“not to be childish”* [UCC Males].

- Presented in an **interactive way** and this was reflected by comments such *“it has to be fun and interactive - if it is not you may look at it once but you might not come back to the website again”* [NUIG Males] and *“people prefer to be doing interactive things rather than reading”* [TCD Females].

- Presented with the **use of colour**, as they believed *“colour catches the eye”* and that *“black and white is very drab”* [TCD Females].

- **Use of cartoons** - NUIG Males stated they would not like to see cartoons used on the website, while TCD Males stated *“you have to get cartoons right and if you get them wrong its annoying”*.

- Presented in a way that is **user friendly** in order for people to use the website Sitemaps and clickable topics were suggested as features to achieve this. This was supported by comments such as *“have tabs for each topic and a sitemap to make it easier”* [UCC Females] and *“you don’t need anything too fancy -the whole idea is trying to get information across”* [UCC Males].
- Presented in a way that it is **available in different languages** in order to be viewable by international students *“there are a lot of international students in college so maybe have it in different languages”* [NUIG Females].
- **Bigger font** – respondents expressed a preference for the font to be bigger and in **Arial format**. *“Times New Roman it is a terrible font -it makes you bored”* and *“I think a slightly bigger font - not that usual 10 or 8 as you want people to read the website easily”*.
- Presented in the form of **shock tactics** and this was supported by comments such as *“I think you need to show people the shock horror”* [UCC Males] and *“I think those ad campaigns for Chlamydia or gonorrhoea are really good- we need to portray the negative images”* NUIG Males].

Reaction to examples of websites demonstrated to focus group.

InfoScotland

All the focus groups felt that this website was the best in terms of layout. Some of the reasons given included that it wasn’t too busy, you could find where things were and it was easy to navigate. No students had heard of this website before.

Positive Aspects of InfoScotland	Negative Aspects of InfoScotland
Booze Talking feature Lots of interactive features. Clickable labels – good to find stuff. Use of Big Font – grabs attention. Homepage – attractive and layout is good. Good use of colour and cartoons.	Booze Talking feature -NUIG males felt it was too quirky Audit Questionnaire – NUIG males felt it would have been better on one page. TCD Males did not like the black background NUIG Males felt there were too many cartoons and they made the website look childish.

SpunOut

There was a clear divide between genders. NUIG Females and UCC Females had heard of the website before.

Positive Aspects of SpunOut	Negative Aspects of SpunOut
Homepage – all females liked it - due to the use of colour, felt it was designed for young people yet not childish, layout was clear and attractive looking and podcast was interesting. Language – females liked that it was informal, conversational and something they could relate to easily.	Homepage – all males felt it was too much going on, looked cluttered and they didn't like the tabular navigation. Language – males would have preferred it to have been more professional/serious but not scientific. Content – all students felt there was too much writing, making it difficult to read but informative.

Drinkaware (Drinks Industry Website)

This was the only website that all the focus groups had heard about previously highlighting the power of advertising.

Positive Aspects of Drinkaware	Negative Aspects of Drinkaware
Content – bullet points and sections were good as there were spaces between them. Felt the layout was simpler and more condensed than SpunOut. AUDIT questionnaire – not too long. Alcohol units section – was liked by all students because units are explained in terms of drinks and uses both text and picture to explain.	Homepage – all students felt it was too simple/bare, needed colour and felt the sitemap would be better placed down the side. UCC Females felt the content style was too formal. Drinks Diary - NUIG & UCC Males and TCD Females felt this was a bad idea as it would be used as a competition to see who drinks the most. TCD Males and UCC Females felt it was a good idea UCC males felt it was promoting alcohol

Overall everything that was mentioned by the focus groups when observing these sites was consistent with and supported points that were mentioned earlier.

Structure

What do you think would be the most appropriate way for students to access this website?

Homepage

All the focus groups mentioned that they would like to access the website via the university homepage *“link from college website – homepage”* [NUIG Males] as they felt that this would be the easiest and most convenient way.

Desktop Icon

When the focus groups were informed about the idea of a desktop icon there were mixed reactions with students outlining the positive and negatives of it.

The advantages included that it could be faster and more convenient and this is reflected in comments such as *“you would probably think of the website quicker if the icon was there”* [TCD Females] and *“there is some stuff I would have absolutely no problem looking up in pc suite but I think it is a really good idea to make it really convenient”* [TCD Males] and *“people would even think oh what’s that yoke I haven’t seen that before and then click on it”* [NUIG Males].

The disadvantages expressed were that there would be no access to the website from home - *“it would be important as well for the summer where you get so much time off and you could still access it then”* [TCD Males/Females and NUIG Males]. Also that students may not use the computer suites to look up certain things *“if you were looking up sexual health you don’t really want anyone to see that”* [TCD Females] and *“it depends on the actual topic I think if you are going to look up some stuff you would like it private”* [TCD Males]. The main reason for this was due to lack of privacy. Finally it was recognised that a lot of students do not use college computers - *“a lot of students don’t use the UCC computers – a lot of people have laptops and wireless”*.

Other suggestions for access that were briefly mentioned in the focus groups included:

- ***Sin*** – college newspaper [UCC Males only].
- ***Link off the Library*** [NUIG & TCD Females]
- ***Google*** – come up as a hit [NUIG Males/Females only].
- ***Student email or a link from Blackboard*** [UCC Females/Males and NUIG Males].

Awareness

What do you think would be a good way to make students aware of this website?

A number of possible channels were identified by the focus groups. TCD and UCC Males stressed the importance of advertising the website and this was reflected in comments such as *“I reckon it doesn’t really matter how good your website is – unless people know about it - they are not going to use it”* [UCC Males]. The following are the advertising channels that were most discussed in the focus groups.

- ***Leaflets and posters*** would be a great way to advertise the website if it was developed - *“plaster every campus with giant banners, posters and flyers”* and *“Keep them very concise with just a few simple points and then put the web address on it where they can go to get further information”* [TCD Males].
- ***Student email*** was also mentioned as a method to inform students about the website - *“we all have our own accounts that we have to log on with basically every time we are on the computer- so maybe there”* [TCD Males]. However TCD & UCC Males stated that the majority of students don’t read their emails unless it is related to coursework and otherwise they just delete it.
- ***Give students free things*** from free fruit to pens and key rings. This was reflected in comments such as *“free stuff always catches student’s attention”* [TCD Females] and *“maybe just give away pens/key rings with the name of the website on it and things like that”* [TCD Males].
- ***YouTube and talks*** – with people who have previously suffered a mental illness or addiction telling their personal life stories [UCC Males only]
- ***Notice Boards***, Student health centre, pubs and nightclubs [UCC Females only]
- ***MySpace*** – This is where students access clubs/societies information online specifically in NUIG and Facebook [NUIG Females only].
- ***Google Search Engine Optimisation*** - to make sure that the website is in one of the top 5 hits when someone searches health information [NUIG Males only].
- ***Blackboard and university*** homepages [TCD Males, NUIG Males and UCC F]
- ***Health themed days/weeks*** [TCD Females/Males and NUIG Males]
- ***TV advertisements*** [TCD & UCC Males].
- ***Clubs and societies*** [TCD & NUIG Focus Groups only].

Conclusion

What students thought overall about developing an online health resource and would they use it?

All the focus groups responded positively to the idea of developing a health information website and this was reflected in comments such as *“I think it is a one stop shop which is a brilliant idea”* [NUIG Males].

In addition; they highlighted several advantages to developing this online health resource:

- The information would be reliable and trustworthy - *“it would be more reliable and trustworthy as google can be hit and miss”*.
- Having one resource with lots of reliable health information - *“having one centralised site with everything on it would be perfect instead of having to look all around the place and then having to judge what’s reliable and what’s not”*[TCD Males].
- It would create an opportunity to find out information that students may not feel merited a visit to a GP. *“there are certain things you don’t want to bother calling to a doctor or think are important enough and you just want to check them yourself”* [NUIG Males].
- The website would be quicker than going to the health centre *“one of the big problems with going to the health service is that you can’t just pop up and ask a question as it takes all day and even if you do go there you are interrupted compared to if you go to a website that you trust and not be interrupted”*.

It was these advantages that lead to all the focus groups stating that they would use this website if it was developed as a resource to access health information. *“Oh definitely – like I think the internet is definitely the way forward anyway”* [TCD Males]. Overall this information suggests that an appropriately developed internet based resource for health information is likely to be welcomed and used by college students.

Key Summary Points

- Despite a lack of trust in the results, students continue to use search engines to source health information.
- Professionalism of the website and content is required to ensure credibility.
- Use a harm reduction approach.
- Interactivity was a key requirement, especially with regard to features.
- Privacy, remote access and use of personal computers were issues with regard to using the desktop icon as an access point to the website.

Computer Services Perspectives On The Development of Internet Based Resources

Exploratory qualitative research was carried out in order to assess the feasibility of the project from the universities' perspectives, specifically in the area of computer services. Key personnel in computer and web services in each of the colleges were identified through the universities listings and invited to take part in the study. A snowball sampling technique was also used throughout this phase of the study.

Originally it was anticipated that semi-structured interviews with the relevant personnel in each of the three colleges would be undertaken. However during initial email consultations, which lead to the development of informal technical options, it became apparent that due to the various technical issues in each of the colleges, a joint computer/ web services meeting would be much more beneficial to the project.

Therefore a joint computer/web services meeting was arranged with representatives from each of the colleges' computer services attending in order to determine the best technical options available for the project. For this joint meeting, the various computer services representatives stated they would need some additional information about the project. Thus we developed provisional requirements for the project which provided a framework for the meeting. In addition, a meeting with HSE personnel was undertaken.

Provisional Requirements for the Website

We provisionally outlined requirements based on what the students and the steering group said they wanted. These were as follows:

- Sharing Content/Authentication
- Access to the website
- Branding
- Management of the website
- Access to Google
- Evaluation
- Level of interactivity

1. Sharing Content/Authentication

It is envisaged that the content for this website will be divided into two parts.

(A) Local Information

This would be specific to each college. For example it would include any health events or alerts specific to each campus and lists of services available to students within the college and surrounding area. This would include an interactive map with the local services highlighted to show their locations, as well as a facility for students to obtain directions to these services.

(B) Generic content

This content would be identical and shared across the colleges. While the majority of the website will be publicly accessible, there may be some programmes/sections of this content that may need to be secured for student access only. It is envisaged that this generic content would include the following:

- **HSE Content on the Website**
There would be some health promotion information with a particular focus on alcohol and a wide variety of topics also covered.

- **Links**
Students would then be signposted to other reliable health information resources rather than the web-based “*help yourself*” array of information that would result from the use of search engines.

2. Branding

It is vital that the project:

- Contains NUIG, UCC, TCD; and HSE branding – in order to ensure credibility with the students and colleges.
- Offers flexibility for other colleges to join in the future.
- Takes account of universities’ individual guidelines and requirements.

3. Access to the website

- Desktop Icon

This would be an “always on” graphic icon on the desktop of universities’ pc suites.

- Link off College home page.

4. Management of the Website

Explore the most cost efficient option for managing the website in the long term.

Allow multiple users to easily and quickly update and edit the website.

5. Evaluation

The website would need to be evaluated in order to determine its efficiency and create an evidence base, in order to inform best practice with regard to delivering online health information to young people.

6. Search Engine Optimisation

Students are currently using Google as their main source of health information.

Therefore it is important that when students “google” health information, that the website appears high up in the list of returned results.

7. Level of Interactivity

One of the main advantages of the internet is its potential to be interactive. Therefore we would envisage that this facility will be exploited by many interactive features including videos, questionnaires and a forum etc.

Computer Services Perspectives with regard to the above requirements:

1. Sharing Content/Authentication

(A)Local Information Content - computer services suggested that Google Maps may be the ideal tool to achieve this as it is both relatively easy to set up and cost effective. You would need to apply to Google for permission to use this tool and request an API key.

The Google Maps APIs give developers several ways of embedding Google Maps into

web pages. These maps can be developed either by someone in each college locally or by a web developer.

(B) Sharing the Generic Content – this was the biggest issue highlighted by computer services.

At the moment there is no system in place for sharing information across universities, otherwise known as “*federated access*”. There are a lot of collaborative talks with regard to developing a system to facilitate this but they are all aspirational at the moment. The expected timeframe for this to become a reality is approximately one to three years. The HEA net are also currently exploring this option of federated access – details http://www.heanet.ie/docs/Federated_Access_Pilot_Initiation_v1.0.doc. The nearest thing to federated access at the moment is “Eduroam” which interconnects user authentication databases, but this is just for network access rather than sharing data.

Therefore, due to the absence of a system to facilitate federated access, computer services highlighted many issues that would need to be considered in order to overcome this issue and develop the best possible plan of action to develop this website and share content across colleges.

Questions Raised/Generated

Hosting – where do you want the information stored? If using external hosting:

- How much do you want stored externally?
- Where do you want students to see the information?
- How much of the content will be public or authenticated?

Hosting

Option 1: One of the colleges hosts the website.

Issues: If one college hosts the website they would want to use their own branding, thus making co-branding, which is a requirement of the project, difficult. Again federated access is an issue.

Outcome – *Rejected.*

Option 2: External Hosting

It was suggested that the best way for this project to develop in the near future without federated access was via external hosting. The HSE was identified as the most likely alternative for external hosting as they are already currently involved in the project.

(A) *HSE* - we have explored the possibility of this option with a representative from the HSE. The HSE only have internal hosting – which means that the generic information for this project would be stored internally within the HSE computer systems. This internal hosting option within the HSE would create an extra layer of security implications for this project, especially as computer services have stated that they would need to be able to access the information from wherever it is hosted, as would whoever the project determines is going to manage the content. Therefore this option may not be satisfactory to the needs of this desktop project.

(B) *Independent Hosting* – this option means that the generic information would be hosted independently of all parties involved in this project i.e. NUIG, UCC, TCD and the HSE. It would require paying an independent web services company to host the generic content. An approximate cost of such a service is about €500euro per year. The advantage of this option is that it allows more flexibility in terms of access to the generic information as it would not require going through another organisation's internal computer system, thus there would be less security implications.

Computer Service Requirements - if the website is externally hosted.

The information needs to be in a format that can be read by the computer systems in each of the three colleges.

- Computer services need to be given the correct access to get the information from wherever it is hosted.
- The information needs to be in a portable format e.g. xml.
- The system needs to be secure.

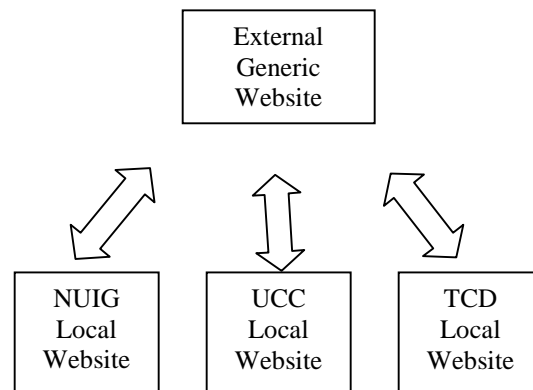
If external hosting is chosen: A decision needs to be taken regarding how much of the information is to be stored externally, this decision will influence which technical option is most viable for the project.

Provisional Technical Options for Developing this Student Health Resource

Option 1: Information is stored half externally and half internally.

Description

This option involves four websites which are all connected via strong links. One generic website, to be hosted externally to the colleges and containing the generic HSE content, would be shared across the colleges. It also involves three local websites, one of which would be hosted in each college i.e. NUIG, UCC and TCD. These local websites would contain local information specific to each college, such as the services available to students.



Developed

The three local websites would ideally be developed by computer services in each of the colleges, subject to their time and resources. If they are unavailable then these websites would need to be set up by a web developer, which would have additional costs. The generic website will need to be developed by an external web developer/company and would involve developing a database and website.

Management Implications

The three local websites would most likely be managed locally in each college. This would involve updating and editing content. The generic content would also need to be updated and edited wherever it is externally hosted.

Branding Implications

The three local websites would be branded to each of the colleges' own individual branding templates, thus meeting the branding requirements of the project. It is also envisaged that the other colleges' and HSE logos would be displayed on each of the web pages.

The generic website can be branded in any way that the project wants: e.g. create an overall brand for the project which could then be incorporated into local websites. This would need to be created by a web developer/designer. It would also need to display the colleges' and HSE logos.

Advantages of this option

- The generic content can be updated and edited in the one place.
- This option does not require each of the colleges to integrate their computer systems, thus avoiding major technical difficulties.

Disadvantages of this option

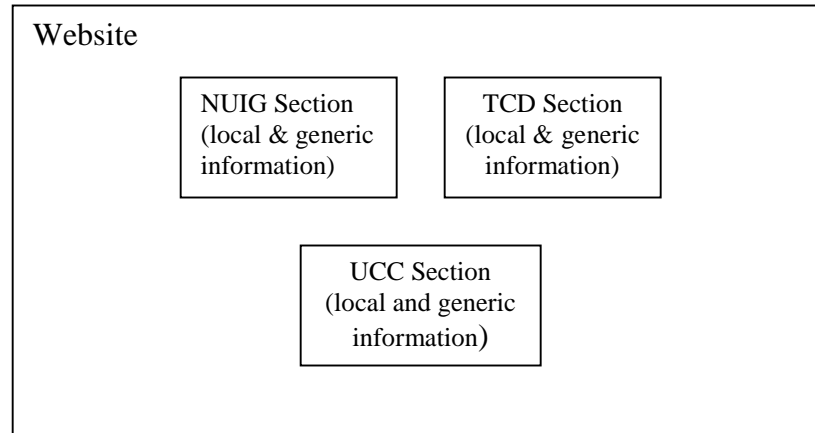
- May seem like a more segregated approach.
- The steering group had expressed that they would like to be able to personalise the generic content e.g. insert links to local services throughout the text. This option does not facilitate this as if one college was to insert local links, it would distort the generic text for the other colleges.
- This would not be the most cost effective way to develop the resource in terms of management as it would require the content to be updated/edited in four individual places.

Note: Strong links would need to be established between the local and generic website in order to ensure an integrated approach.

Option 2: All the content is stored externally.

Description

Both the local and generic content is hosted externally from the colleges. It would be one external website with different sections for each college.



Developed

It would be developed by an external web developer/company with little or no direct involvement from computer services in each of the colleges, apart from adding links from that college's website and providing the college's template. This option would involve developing a database and one website.

Management Implications

This option may be easier to manage as all the content, local and generic, can be updated/edited in one location.

Branding Implications

This website can be designed/branded in any way that the project wants e.g. create an overall brand for the project and incorporate the colleges' and HSE logos. This would be created by a web developer/designer.

Alternatively computer services in each of the colleges could provide their own branding template to the web developer/designer which could then be used to brand their own section of the website, thus facilitating individual branding.

Advantages of this option

- This option may be the best option in the long term, especially if the majority of the content is public. It may also be the best option in terms of facilitating other colleges if they wish to join the project at a later stage.
- In this option, management of the website is easier and perhaps more cost efficient as it can be all updated/edited in one location.
- Individual branding is achieved while showing a very consistent and integrated approach to the overall project.
- This option does not require each of the colleges to integrate their computer systems, thus avoiding major technical difficulties.
- Each college can personalise the generic content with local links.

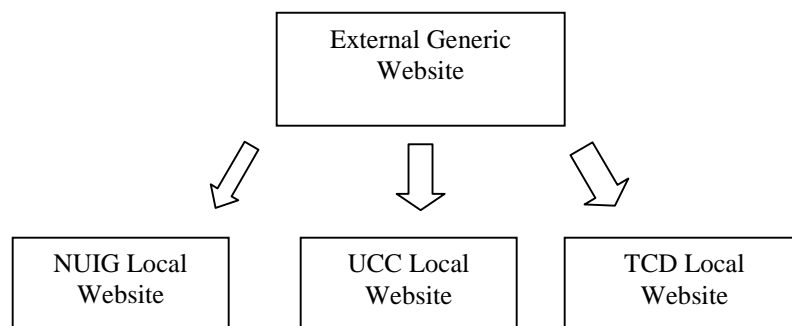
Disadvantages of this option

- There would be significant initial costs for developing this system.

Option 3: Information is stored half internally and half externally, but all content is viewed internally in each college.

Description

In this option there are three local websites, of which one is hosted in each of the three colleges. These local websites contain the local information specific to each college. The generic information that is to be shared across the colleges is hosted externally. However, instead of students viewing this generic information externally, it is pulled or pushed into each of the college's computer systems and onto each of the local websites.



Developed

The three local websites could be developed by each of the colleges' computer services departments, subject to time and resources. The generic website/database would need to be developed by an external web developer/company. It would involve developing a database and then only a website interface in order to facilitate editing the content. This website interface would not need to be viewable by the public. It would be important that the generic information is stored in a format that can be read by each of the college's computer systems and that computer services can access this generic content, which is stored externally.

Management Implications

The generic content can be updated/edited in one place and then can be "pushed" or "pulled" to each of the local websites, for example via RSS feeds. If the content is "pushed" – this means any new generic content is automatically pushed onto each of the local websites thus requiring less management. If the generic content has to be "pulled" to the local websites – it requires someone in each college to draw down the updated content to the local website.

Branding Implications

Once the generic content is pushed or pulled through each of the college's computer systems, it is automatically branded with the college's own logo and template. All the web pages would also display the other colleges' and HSE logo too.

Advantages of this option

- This option would be the best if some of the generic content had to be restricted, as it facilitates local authentication, which is the only real feasible option in terms of authentication due to cost and management issues.
- There would be no need to design a generic website, which may have cost saving implications.
- The generic content can be personalised with local links when it enters the college's local websites.

Disadvantages of this option

- Duplicating content in three places.

Note: The steering group have provisionally stated that option three is the preferred option, subject to content and the need for authentication.

The difference between this option and option 1 is to facilitate local authentication.

Authentication

The key question with regard to choosing the best option to develop this website is dependant on how much of the content is in the public domain and how much is restricted access for students only.

Authentication Implications

- By asking students to log into the website there is a risk that the extra steps required may put students off, thus affecting penetration to the website and its overall effectiveness.
- Students outlined that anonymity and confidentiality were two key issues and these issues would also be adversely affected if a high level of authentication was required.

Computer Services Perspective

It would be easier from a technical perspective if there were no aspects of the website restricted. It appears from this phase of the project that authentication is a very complex issue and will require much further discussion in the next phase with computer services, steering group and any web development company in order to reach a solution.

Issues

There may be issues integrating current authentication systems with other systems. The colleges cannot use student information e.g. student ID numbers for any other purpose than that which they are gathered for in order to comply with data protection laws.

Options for Authentication

- No authentication – all information is freely available to the public.
- Independent Authentication
- Local Authentication.

(1) Independent Authentication

This system is independent of college's authentication systems and infrastructures. This system would require users to sign up to use the site with their own specific username and password. This independent authentication could happen upon entrance to the central website or you can put an access point in each of the universities. For example if you sign up for a google mail account – you sign up and get your own password and they maintain that password on the site.

Disadvantages of Independent Authentication

This authentication system would have additional costs as it would require someone to manage this service on a daily basis and in the long term.

This authentication system would have substantial costs to develop and set-up.

It is another username and password that you are asking students to remember.

(2) Local Authentication

This system occurs within each of the colleges' computer services and is controlled internally. As students' details are stored within each of the colleges' computer systems it may be possible to use student ID numbers to log in.

Advantages of Local Authentication

Can adhere to local authentication policies and does not require colleges authentication systems to integrate.

Can possibly be developed and maintained by computer services in each college.

2. Branding

Computer Services Perspectives

- No one individual college brand could be used for the project as all the colleges need to brand to their own template, requirements and logos.
- Web designers in the colleges may assist with branding but this is subject to time and resources.
- Whichever option is chosen, it will have branding implications.

Suggested Options for Branding

Use Colleges and HSE Branding

- Put the different college logos down the side of the web pages so that everyone can see instantly who is involved in the project.
- An example is: <http://www.tcd.ie/English/eclrni/index.php> - this approach may need to be re-evaluated, depending on the number of institutions that become involved at a later stage.
- Put these logos on the side rather than on the bottom so people with smaller screens or resolutions can immediately see them.
- **Advantages** - ensures consistency, credibility and displays an integrated approach as both the colleges and the HSE are respected organisations.

Develop a concept for the overall project and brand accordingly.

- Example - use specific colours/graphic on the generic website that can also be integrated into each of the colleges local branding.
- **Advantages** - ensures consistency and an integrated overall project brand.
- **Disadvantage** – the new brand would need to be heavily marketed in order to make people aware of it. Some of the credibility for the website and the health information could be sacrificed. This may also have additional costs as a graphic designer would need to be employed.

3. Management

It is vital for the success of the website that the content is kept up to date, thus requiring day to day management. It is essential that the website is well maintained and that the technical maintenance requires minimum skill training and time. To this end, the website should be designed with a content management system. This will prove to be an additional cost but should prove more effective in the long term.

The key issue for this project is determining which option is the most cost effective approach, taking account of funding and resources. Both the local and generic content needs to be managed on a daily basis.

Management Options

Local and Generic content managed in the one place

The most likely cost efficient option for managing this health resource in the long-term is option two, which has both the generic and local information in one place, thus requiring only one person to be employed to edit and update all the content.

Local Management

If the project had resources already available in each of the colleges to manage the content or if resources existed within one or more of the colleges that were available to undertake this, then local management could be a more cost effective method.

Local management would also enable each of the colleges to update/edit their own content.

- In ascertaining the true cost of local management, account should be taken of the amount of time needed in each institution to adequately maintain this project and the opportunity cost of that time.
- Computer services in each of the colleges have stated that they can help set up the local websites structure from an agreed sitemap and provide training to relevant personnel in CMS in order for them to be able to manage the website locally.

External Management

Even if local management is more suitable for this project – these options facilitating local management also require management of the generic content externally.

It would be important that no matter which Web Company develops the external database and website, that they provide training on the system to the relevant personnel responsible for managing the content.

4. Access to the Website

(A) Desktop Icon

This would be an “always on” graphic icon on the desktop of universities pc suites.

Computer Services Perspective - may possibly be an option but unlikely. Links to the website would be a better option.

Highlighted Issues

- In order to get a desktop icon in the college pc suites – it would have to go through an approval process in each college.
 - This approval process would happen when the project specification report is been developed in the next phase of the project specifically when all the requirements will be reviewed to see what NUIG, UCC and TCD can and cannot do.

Note: Even if the option of the desktop icon is not successful in each college, it may create the opportunity to compare uptake within colleges with and without the desktop icon.

- There is a lot of competition for this space and so Computer Services felt it was unlikely to be successful.
- Personal computing was seen as more common place now than usage of the college-provided computers. It was suggested that the ratio was in the region of 80/20, thus it was felt that this method may not be the best way to reach students.

- Computer Services do not have the facility to put the desktop icon on students' personal computers/laptops.
- It was highlighted that students are now moving away from traditional methods of computing and are using multiple devices, such as mobile phones or blackberries.
- The option of having the website accessible via mobile phones, especially regarding access to key information and support services, should be explored in the next phase.

Link off College Homepages

Computer Services Perspectives - may possibly be an option, but unlikely.

Highlighted Issues

- The homepages in the colleges are very corporate. It was felt that this option would not be likely to prove acceptable to all concerned but could be investigated further when the website is being developed.
- It was highlighted that students don't usually access the college home pages.

Possible Options for the Future: Links

Have as many links as possible to the website within each of the colleges, but be careful not to overdo things. Possible places for links to be created would need to be identified, one option would be to put links wherever students log into the college network. There are many ways for students to log in at any one college. Examples include:

- NUIG students are automatically defaulted to the current students section.
- UCC students log onto the computer network via a student portal.
- TCD students are directed to Myzone.

It would also be important to put the links for the website beside features/sections that students use on a daily basis e.g. students union, library and clubs/societies etc. Have links in related sections/services within the colleges, for example:

- Health Centre/ Counselling
- Disability Section/ Health Promotion

5. Evaluation

The most effective websites monitor their traffic and evaluate the website's efficiency.

Computer Services Perspectives

Evaluation of the website in terms of usage figures (metrics). Google analytics was outlined as an ideal tool – as you would just need to put the agent on the site and it builds up reports for you. The advantage of this is that it is easy and free.

If you have authentication – students are required to use credentials to log onto the website thus it is easier and more accurate to keep track of who is using the website. If it was just a public facing website, anyone could go on the website many times each day.

6. Interactive Features

Computer Services Perspectives

The system would initially have to be built to incorporate media and interactive features. The only thing mentioned thus far was videos. The colleges don't have a huge capacity within the existing infrastructure for such rich content, thus videos would have to be served centrally and then embedded into college pages, or perhaps uploaded onto Youtube and then embedded into college pages.

7. Search Engine Optimisation

Computer Services Perspective

Access to Google depends on:

- The content, in terms of how much is viewable by the public and how much is private or protected.

Where the content is hosted:

- Once these are decided upon in the next phase of the project – you can determine the tagging the website will get and where it will be searched from.

Sourcing the Content

The content of the website is key to its success.

Local Content

Develop the local content specific to each college. Some guidelines have been identified in the literature review for this task.

Generic Health Content

- 1) Identify a priority list of topics. We have identified topics that should be addressed on this student health website – [see Appendix (I)].
- 2) Develop criteria for the actual content that you want to put under these specific topic headings.

Some key criteria for content that is already known:

Steering Group & Evidence Base:

- Health information that is targeted at a specific population is more effective than general health information i.e. content should be targeted specifically for students and students also stated this as a requirement of the content.
- Content should be referenced/up to date and evidence based.
- Content should be branded by a credible organisation in order to ensure credibility for students, and to ensure quality of the content to the universities involved in the project.
- Generic content should be localised to each college with links to relevant local information and support services.

Student perspectives with regard to content:

- Should cover a variety of topics.
- Use a harm reduction approach.
- Students wanted content to be developed by professionals in order to ensure the credibility of the health information presented. HSE and College branding were seen as indicators of the endorsement of reliable and credible institutions.
- Trustworthy and reliable.
- Presented in the shortest possible fashion, interactive and in a user-friendly way.

- 3) Source the content – ensuring that it meets the above criteria.

Options for Sourcing the Generic Content

Does the content exist already?

Option 1: HSE/SpunOut Option

The HSE fund SpunOut to provide online health information and service signposting for young people aged 16-25 years (which would also cover the majority of 3rd level students). The content provided by SpunOut is validated by an advisory group, consisting of a number of HSE staff and experts in various fields, for clinical accuracy. The SpunOut website has recently been revamped with regard to design and navigation. At the moment they are editing the existing content and in early 2009 they will be developing multi-media capability and content.

The HSE/SpunOut has been informed of this project and we have liaised with them informally. They are both willing to collaborate in developing this project in the future; one possible suggestion in this regard was to explore the possibility of SpunOut providing content for the website. This suggestion has been discussed with the HSE/SpunOut and they are positively disposed to the idea.

- Content produced and published through SpunOut may be published on HSE Population Health websites or HSE Population Health micro sites with the appropriate reference and acknowledgement. Consideration would have to be given to any work associated with this desktop project that is outside of the existing Service Level Agreement between HSE and SpunOut. Additional funding may be required to complete additional work.
- SpunOut are also willing to work on content partnership with this project on the condition that there is links to SpunOut.

Therefore the use of SpunOut/HSE content is an option to consider and explore further. In order for this option to come to fruition, the budget holder in the HSE with regard to this desktop project would need to propose this option with the personnel within the HSE who provide funding to SpunOut. Also further negotiations would need to take place involving SpunOut, HSE and members of this desktop project.

There are many advantages for this particular option:

Possible advantages to SpunOut

- It is a channel for them to reach more of their target market 16-25 year olds, specifically college students.
- Continues to show SpunOut are leading the way with delivering online health information.
- Will maximise the number of young people linking back to the SpunOut website.

Possible advantages to HSE

- Highlights partnership working and collaboration of two projects that the HSE have funded. This could have cost effectiveness advantages.
- It also provides the HSE with an opportunity for positive branding and enables them to reach another population i.e. that of younger adults.

Possible Advantage to Desktop Project

- It is more cost effective than developing content specifically for this project.
- Both SpunOut and HSE have experience, SpunOut have the infrastructure and skills but may require further funding in order to carry out any additional work necessary for this project.

Within this option – there are two alternatives:

- 1) If HSE/SpunOut content is sufficient – they provide it all.
- 2) If there are some gaps in what they provide and what we require – SpunOut/HSE could possibly be commissioned to provide the additional information, or other key organisations in the topic area could be asked to develop or provide the required information.

Option 2: Liaise with existing key organisations

Liaise with key organisations in each of the topic areas that already provide online health information and ask them to provide the relevant content in that area. We have already identified reliable and trustworthy key organisations/resources that currently provide online health information in the various topics – [see appendices (A-H)].

- Another option could be to approach staff at Dundalk IT (Counselling Department) who are developing the educational materials for the Mental Health Portal Project.
- Additionally these key organisations and existing health resources could be linked from the website and vice versa.

Develop new content specifically for this Desktop Project

Option 3: Develop the content specifically for this project

In the next phase of the project someone would need to be employed to develop the content. This process would have additional funding and resource costs and take a longer timeframe to set up and complete.

Commission SpunOut to Develop the Overall Project

Another possible option which may be worthy of exploration is to commission SpunOut to develop the entire project specific to requirements. SpunOut are currently working in the area of providing web based health information for the target population and may be able to implement an alternative user interface accessible and appropriate to college students. This option may require additional funding as it is currently outside the existing Service Level Agreement between SpunOut and HSE.

Advantages of this option

- SpunOut would already have the majority of the structures necessary for developing the project in place.
- They would also have valuable in-house expertise in developing online health information/ promotion and IT.

Conclusion

Computer services departments responded positively to the development of this health resource for students. They provided us with many technical options for the future development of the project and the implications of those options. However they did also highlight some key issues that would need to be addressed in order for the project to be executed efficiently. These include sourcing content to determine authentication, design requirements and external hosting. These issues will require further discussion as the project evolves in order to bring it to the best possible conclusion.

The external website and database will most likely need to be developed by an external web company. While computer services are willing to be involved in development of the local websites, it was acknowledged that they have limited time and resources and so may not be able to undertake the practical element of development beyond guidance and support. Computer services work on a queue basis and thus would require advanced notice of when the next phase of this project is being developed, alongside specific requirements of what is needed in order to be actively involved at that stage. Overall, while many issues were highlighted from a technical aspect, none were seen as so significant that the project could not proceed to the next phase of development. Thus this student health resource is feasible from a technical perspective.

Key Summary Points

- Due to federated access issues there is a need to secure external hosting.
- Authentication is a complex issue that requires further investigation.
- An external web company is required to develop the generic website/database.
- Source content – HSE/SpunOut maybe an option worthy of exploration.
- Students are now using mobile devices rather than desktop computers.
- A project manager, advanced planning and an overall formal approach is needed in the future to develop this desktop project.

Recommendations from this Feasibility Study

Secure funding for the project.

Set up steering/working group for the overall project.

Employ a project manager.

Develop a long term plan for the project and outline management structures.

Develop a promotional strategy.

Secure hosting.

Source/develop all the content (local and generic information).

Liaise with other health promotion resources that may offer linking potential.

Set up a review panel for content.

Develop a sitemap of the website.

Tender for external web developers and designers.

Compile a project specification report – outlining what, when and how.

Liaise with computer services in each college, web developers and designers.

Develop website/s, database and branding for the project.

Pilot and evaluate website.

Provide staff training for management of the website.

Develop editorial policies.

Develop an evaluation methodology.

Realising the Project

Securing Funding is crucial and all further progress is predicated upon there being sufficient funds available to execute the various measures required to bring this project to fruition.

Set up a steering/working group for the overall project – allowing for new colleges joining.

Employ a project manager. Due to the multifaceted nature of this project and the necessary involvement of many different professionals such as web developers, IT and health promotion professionals, it is important for the next stage of this project to progress that a project manager is employed.

- A project manager is the person accountable for accomplishing the stated project objectives. Key project management responsibilities include creating clear and attainable project objectives, building the project requirements, and managing the triple constraint for projects, which is cost, time, and scope.
- It would also be important that this project manager have equal expertise/knowledge in the areas of health promotion and IT. Although computer services did not specifically state that the project manager would need to have an IT background, familiarity with IT would be an obvious advantage.

Phase 1 - Planning & Gathering Content (approximately 3months)

This is the most important part of the project, where the foundations are laid for future development.

Developing a long term project plan is essential in order to secure commitment to the project and focus all stakeholders towards achieving the same goal of developing this desktop health resource for students. Ideally a project plan should clearly outline the following:

- Aims and objectives of the project.
- Specific requirements of the project.

- Roles and responsibilities of all stakeholders. This would be especially important when approaching computer services in terms of what the project requires from them.
- A realistic time frame for the project. It is envisaged that this project should be developed in stages, so it should be laid out what activities and tasks will be happening at any given point in time. This would be vital for computer services as they would need to know in advance when they would be required so they can allocate the necessary time and resources in their schedule.

Secure hosting. Due to there being no system currently in place to facilitate federated access, it is vital that hosting is secured. [See page 56/57 for hosting options].

Most likely a policy or memorandum of understanding will have to be developed, outlining issues such as security and back-up facilities.

Source all the content. Proposed content for this website is divided into two sections - local and generic content.

- Each college needs to **compile local content** e.g. services available within the college and surrounding area. A provisional list of the various types of services that would need to be addressed on the website and some guidelines about the type of information that should be covered under these services is identified in this report [See page 34/35].
- **Generic health content** to be shared across the colleges will need to be sourced/developed. Provisional lists of priority topics and possible options for sourcing this content have been outlined in this report [See appendix (I) & pages 70-73].
- **Identify interactive features** that can be integrated into the website. A list of features that should be incorporated into the website, as stated by students and from the literature review, is identified in this report [See Appendix (J)].
- **Contact and liaise with existing health organisations** that may either provide some generic health content or act as possible links off the website [extensive list of existing health resources in various topics –[see appendices (A-H)].

Continue liaising with Michael Nowlan, who is a consultant working on the Mental Health Portal Project which is also currently being developed. There may be some scope to work together in the future, especially with regard to mental health content. The Mental Health Portal is a collaborative project between TCD, NUI Galway, UCC and Dundalk IT. It aims to enable students to access e-counselling and mental health information features and services.

Continue liaising with Derek Chambers in the National Office for Suicide Prevention

Continue liaising with the Technology for Well-Being Group.

www.technologyforwellbeing.ie was set up in 2007 in order to bring together providers of support services related to mental health and well-being who use ICT (Information and Communication Technology) based platforms, in order to share learning, develop good practice and encourage the integration of a range of accessible services in Ireland. They have recently got funding for the development of various projects such as:

- Text Based Support for Samaritans.
- Developing an online national counseling service.
- Pilot online counseling service for LGBT as part of BelongTo.
- PleaseTalk.ie – to be expanded into all 3rd level colleges.
- Online counseling research in Trinity.

Set up a review panel for content. It is envisaged that this panel would include professionals/experts in each of the health topics covered (possibly use some of the existing resources outlined in this report) and students.

In order to mitigate the cost of making changes to the content in the future, it may be best to **use some sort of prototyping** initially to illustrate web interfaces and create a sitemap. A site map is a representation of the architecture of a web site. (Moville, 1998, pg.58)

- There are many ways to do this, such as wireframes, site maps, process flows and/or page description diagrams (PDDs).

Once all the content for the websites is gathered in one place – the following can be determined:

- (i) **Final requirements for the project** (incorporating the provisional requirements identified in this report). For example: Is there any content that needs to be authenticated?
- (ii) **Which of the technical options may be the most suitable** to meet the identified project requirements.
- (iii) **Exact costs for the project** given the amount of content and features that will be incorporated on the website.

Regardless of the technical option chosen, a **tender for an external web developer/company and designer for the project** must be issued. The project should follow any necessary procurement guidelines.

- It is recommended that quotes are sought from the external web companies for developing both the external and local websites. Also it is recommended that quotes are sought from designers with regard to developing the branding for the project. While computer services have said they may be able to develop these local websites and assist with branding - it is subject to time and resources, thus it may be best to cover all possibilities.
- Also if the HSE and/or colleges are providing funding – they may have certain procurement processes and guidelines which would need to be adhered to.

Phase 2: Development Phase (6 months)

This is where the technical platform for the desktop project and content will be assembled.

The first stage of development should involve **putting together a project specification report** – which would fully define what is to be delivered, when and how. This can either be developed by the project manager or the web developer.

This should involve **liaising with the various computer services/ web developers** in each of the colleges in order to determine what they can and can't do based on time and

resources. Aspects such as: developing local websites (if required), providing training in whichever CMS system is being used or develop the brand etc.

All the requirements would need to be addressed, especially the issues of authentication and desktop access.

Practical phase of **developing the database, websites and brand**. This should include:

- The best technical option to meet the requirements of the project [See provisional technical options – pages 58-63].
- Design features outlined in this report [See appendix (J)].
- Liaising with a designer to develop branding.

It is important during the development phase that **students are involved** in informing design.

- This should include **user and accessibility testing** (formative evaluation).
- We have provided a list with names of students who were involved in data collection for this report. These could possibly be approached to be part of a **student working group**.

Once there exists a working model of the website – it **needs to be piloted** and any necessary changes made before the website is re-launched.

Outcome Evaluation – this health resource would need to be evaluated in order to determine whether or not it is proving successful in improving student health.

Promoting the Website

Promotion is integral to the long-term success of the website *“I reckon it doesn’t matter how good your website is as unless people know about it - they are not going to use it”*.

A **promotional strategy** should be developed which should include an **official public launch of the website** and an ongoing promotional campaign. It may incorporate some or all of the following:

- **Online promotion** through website banner exchanges, links exchanges, embedded meta tags, search engine registration and promotional emails. These links should ideally be located on each of the colleges websites, especially sections that students use on a daily basis, and also on websites that are popular with the target audience such as social networking sites, Youtube, sports and entertainment websites.
- Develop promotional **leaflets, posters, newsletters**, wallet cards and banners.
- Students stated that these should be kept short, concise and display the web address.
- They should be disseminated in places where students congregate.
- **Run promotional competitions** and health themed days with free prizes, especially during induction week.
- The use of promotional advertisements in Fresher handbook/diaries, and the back of bathroom doors.
- **Engage with the media**, including representatives of national and local (colleges) press and radio.
- **Internal communications within all universities** to ensure that lecturers, tutors, wardens, doctors and nurses and all those in contact with students can refer students to the site.

Management of the Website

- Provide training in the relevant content management system to personnel in order to facilitate updating and editing the websites on a daily basis.
- Policies should be developed, outlining:
 - Editorial control of the generic content and the local content at each of the colleges.
 - How often should the website content be reviewed and the overall project evaluated.

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Appendix (A)

General Health Information Resources


SpunOut

Name: SpunOut www.SpunOut.ie 		
Developed by: the youth-led Community Creations charity and is endorsed by key youth, health and community bodies.		
Purpose: SpunOut.ie aims to guide young people through life with quality information support and inspiration and provide a platform for them to express their opinions.		
Targeted: Young people (16 to 25 years). Funding: public, private/philanthropic sources including HSE.		
Some Topics Covered	Key Characteristics	Additional Information
Alcohol & Drugs	Run with, by and for young people. Has been evaluated.	Content is comprehensive – maybe a little cluttered/design is attractive.
Disability/Accommodation		
Equality/Healthy Body	Has a moderated discussion forum. Site is accessible via a mobile device.	Had an about us, contact us, and disclaimer statement on site. Met (W3C) Web Content Accessibility Guidelines.
Healthy mind/Money		
Natural Health/ Rights	Has a comprehensive find help section with maps. Signposts users to support services on all topics.	Multi-agency steering group. Has a search facility, RSS feeds, Bebo page, feedback section, facility to allow young people to submit articles/media.
Personal Safety/ Sexual Health		
Spirituality/ Work	Interactive – good use of graphics, pictures, videos. Content was simple and clear.	
Travel/ Relationships		
Education/Sexuality		


Healthpromotion

Name: Healthpromotion www.healthpromotion.ie 		
Developed by: Health Service Executive		
Purpose: To facilitate the provision of quality health promotion information materials nationally.		
Topics Covered	Key Characteristics	Additional Information
Alcohol	Alcohol section was targeted at teenagers and parents. Alcohol laws outlined.	HSE publications available and facility to order them.
Breastfeeding		
Young People	Sexual health section addressed contraception and STIs.	Privacy/Disclaimer statements & contact details were provided.
Mental Health		
Drugs	People were redirected to Drugs.ie, Breastfeeding.ie and SpunOut.ie	Has not got a high level of interactivity or graphics.
Sexual Health		
Healthinfo.ie	Provided list of places to get help.	


VHI

Name: VHI www.vhi.ie 		
Developed by: VHI		
Purpose: provides general information on VHI health insurance and various health-related issues.		
Targeted: Public		
Topics Covered	Key Characteristics	Additional Information
Diet & Nutrition	Website has a-z index, health headlines, Google search bar and downloadable information.	Content is targeted for life stages i.e. students, men, women or senior.
Exercise & Fitness		
Lifestyle/wellness	Is very interactive and includes a Discussion forum - everyone can view but only members contribute.	Content is very comprehensive but simple and easy to understand.
Travel Health		
Health at work		
Illness & conditions	Ask the experts – life coach, dietician, midwife, parenting expert, fitness expert, stress expert and dentist. Includes a 24/7 nurse line, but only to members.	Design of website is user-friendly, good use of graphics and interactive features.
Quit smoking		
	Has quizzes, health podcasts, FAQ & facility to ask queries.	Has HONcode approval stamp.
		Has an about/contact us section, privacy statement, copyright and terms & conditions.


Mystudentbody [American Website]

Name: Mystudentbody www.mystudentbody.com 		
Developed by: Inflexxion Inc		
Purpose: promotes healthy behaviors and responsible decision making.		
Targeted: Third level students		
Topics Covered	Key Characteristics	Additional Information
Alcohol	Ask the expert [credentials were given]	All information was referenced.
Drugs		
Tobacco	Students can submit articles.	Statements regarding privacy, confidentiality and terms of use.
Sexual Health	Updated college news section.	
Nutrition	Self-administered risk assessments with feedback.	
Stress	Interactive tools such as games, quizzes, activities, use of video, colour and pictures for each topic.	Funding identified from the National Institutes of Health (NIH).
		Good use of graphics and was easy to navigate.

Thesite.org [UK Website]

<p>Name: Thesite.org www.thesite.org </p> <p>Developed by: TheSite.org is owned and run by YouthNet UK, a registered charity founded in 1995.</p> <p>Purpose: to provide high quality, impartial information and advice on all the key issues facing young people.</p> <p>Targeted: Young adults aged 16-24.</p>		
Topics Covered	Key Characteristics	Additional Information
Sex & Relationships	<p>Provides a range of support services. Can submit queries on all topics, expert will respond within 3 days. Signposts users to local services – for advice. National help lines directory -on all topics.</p> <p>Have discussion boards and can get information on mobile.</p> <p>Website is user-friendly has a search facility, a-z index, RSS feeds, FAQ and sitemap.</p>	<p>Has an about us section with credentials given. Also has contact us, feedback section, privacy and legal information are displayed.</p> <p>Content is comprehensive and easy to understand with use of audio, video and graphics.</p> <p>Website is interactive and good use of graphics and colour.</p>
Health & Wellbeing		
Drink & Drugs		
Home/Law & Money		
Work & Study		
Travel & Free Time		

Children, Youth and Women's Health Service [Australian Website]

<p>Name: Children, Youth and Women's Health Service www.cyh.com </p> <p>Developed by: Children, Youth and Women's Health Service (CYWHS)</p> <p>Purpose: promotes the health, well-being and development of children, young people and families across South Australia by providing up-to-date health information. Each target group has a separate website.</p> <p>Targeted: Young adult website link is targeted at 18-25 year olds.</p>		
Topics Covered	Key Characteristics	Additional Information
Healthy Body	<p>Signposts users to other resources in Australia.</p> <p>All content is comprehensive, easy to understand, updated and referenced with links to sources.</p> <p>Website is user-friendly due to sitemap, a-z index and search facility by topic/sites.</p>	<p>Has an about us/contact us section. Disclaimer, copyright and privacy statement.</p> <p>Website is simple in design with some use of pictures, colour, podcasts and videos.</p> <p>Has weekly updates, questions and tips of the week.</p>
Healthy Mind		
Relationships		
Sexual Health		
Drugs & Alcohol		
Our Society		

Other reliable and trustworthy resources for general health information on a variety of topics.

www.hse.ie

Health Service Executive Website

www.dohc.ie

Department of Health and Children.

www.pleasetalk.ie

Was developed in University College Dublin (February 2007) in response to the death by suicide of a student. It has since been adopted by all the Universities in the State. Its aim is to alert students to the varied and important student services that are available to them in their University if needed.

www.headsup.ie

Headsup is Rehab's free 24 hour text service. It enables young people to access a range of helpline and support services on issues such as such as relationships, suicide, sexual health and mental health, simply by texting the word "Headsup" to 50424.

www.irishhealth.com

Is Ireland's independent health website, designed to offer users a comprehensive online source of medical and healthcare information. There are hundreds of common conditions, resources, tools, links and online user discussion channels.

www.reachout.com.au

Reach Out is an initiative of the Inspire Foundation. The aim of the service is to improve young people's (16-25) mental health and well being by providing support, information and referrals in a format that appeals to young people.

www.healthfinder.gov

Healthfinder acts as an official gateway to reliable - mainly American health sites. It is simple to understand and contains an easy to use search engine which can quickly direct a user to specific sources of information on other sites.

www.nhsdirect.nhs.uk

The UK Government's version of the US's healthfinder. It has a health encyclopedia which allows you to access information on a range of medical conditions and it provides easy-to-read lifestyle and general health advice.

<http://www.embarrassingproblems.co.uk/>

It seeks to provide information about health issues that people commonly feel too shy to ask their doctor about or to discuss with anyone.

<http://www.patient.co.uk/>

This is a useful index site that allows users find information about almost every health issue known and services available. It also includes a handy alphabetical search engine.

<http://www.nlm.nih.gov/medlineplus/>

The National Library of Medicine's authoritative and current database of health information for consumers and health professionals. It includes conditions and diseases, drug information, dictionaries, physician and healthcare directories, and links to other medical resources.

www.goaskalice.columbia.edu

Go ask Alice is a health question and answer resource produced by Alice, Health Promotion Program at Columbia University USA. It provides readers with reliable, accurate and accessible competent information.



www.bbc.co.uk/health/

Features current news plus archives, guides by subject, "Ask a Doctor" inquiry feature, a searchable conditions database and discussion forum.


Appendix (B)

Alcohol Resources

Alcohol and Substance Abuse Program (GAA)

<p>Name: Alcohol and substance abuse program www.asap.gaa.ie</p> <p>Developed by: GAA</p> <p>Purpose: reduce harm caused by alcohol and other drugs. Targeted: Public especially sports players</p> <p>Topic Covered: Alcohol & Drug information</p>		 
Key Characteristics	Additional Information	
<p>Provides information on various drugs and covers issues such as effects, use, dependency, withdrawal, legal penalties and overdose risk.</p> <p>Cover alcohol information such as effects, alcohol/ law and suicide/deliberate self harm.</p> <p>Lists of support services for each county.</p>	<p>Video messages from GAA players from each county about drugs/alcohol.</p> <p>Linked up with the Drug and Alcohol project and so had a link to the live helper.</p> <p>Content was short, simple and easy to understand.</p> <p>Design was simple with limited use of pictures, colour and interactive features.</p>	


InfoScotland [Scottish Website]

<p>Name: InfoScotland http://www.infoscotland.com/alcohol</p> <p>Developed by: The Scottish Executive</p> <p>Purpose: to alert the population whose drinking may be causing them harm but who are not aware of the health consequences of their drinking behaviour and habits.</p> <p>Targeted: general population of Scotland between the ages of 25-45years Topic: Alcohol</p>		
Key Characteristics	Additional Information	
<p>Website has many interactive features such as</p> <p><i>Booze Talkin</i>—explores attitudes/behaviours associated with drinking in relation to key settings.</p> <p><i>Drinking Questionnaire</i> (AUDIT)</p> <p><i>Drinking Time Machine</i> – shows the immediate/long-term health effects of alcohol.</p> <p><i>Booze Quiz</i> – dispelling myths around alcohol.</p> <p><i>Drinks Diary</i> – to keep track of drinking.</p>	<p>Provides information on alcohol in relation to culture, relationships, work, health and the law.</p> <p>Provides information on alcohol facts, alcohol advice, effects of alcohol, men/women and alcohol, alcohol and mental/sexual health.</p> <p>Signposts users to other support services/ organisations. Website is user-friendly.</p> <p>Content is portrayed with the use of text, pictures (cartoons), graphics and interactive activities.</p> <p>Has accessibility, disclaimer, privacy statements and contact us section.</p>	

Knowyourlimits.gov.uk

<p>Name: Knowyourlimits http://www.knowyourlimits.gov.uk/</p> <p>Developed by: NHS</p> <p>Purpose: to provide accurate alcohol information with specific reference to alcohol and units.</p> <p>Targeted: General Public</p> <p>Topic: Alcohol/Units</p>	
Key Characteristics	Additional Information
<p>Content covers alcohol and units, effects of alcohol on the body, alcohol and pregnancy, myths and advice on how to cut down.</p> <p>Website is interactive - it has an activity to determine how many units are in drinks, a unit calculator which takes account of alcohol % and size of glasses and a drink check quiz.</p> <p>Website design is simple but user-friendly.</p>	<p>Users are signpost to external links but some of these are to Drinkaware.co.uk [drinks industry website], as is the online drinks diary provided.</p> <p>Website has provided a sitemap, terms and conditions and privacy policy statements.</p> <p>Website has short and simple content that is easy to understand due to use of text and graphics to portray information.</p>

Drugsprevention.net [Northern Ireland]

<p>Name: Drugsprevention.net www.drugsprevention.net </p> <p>Developed by: Health Promotion Agency for Northern Ireland</p> <p>Purpose: provide reliable alcohol and drug information</p> <p>Targeted: at individuals, organisations and agencies who work in drugs and alcohol prevention, education and treatment throughout Northern Ireland.</p> <p>Topics: Alcohol & Drugs</p>	
Key Characteristics	Additional Information
<p>Drug content covers drug use, statistics, facts, effects, preventing and reducing drug related harm, policies, theories of drug use, law, topics of interest.</p> <p>Alcohol content addresses user statistics, facts, effects, sensible drinking guidelines, problem drinking, policies and topics of interest.</p>	<p>Has an updated news/events section, copyright, legal notice, privacy policy, contact us/about us section</p> <p>Signposts users to other resources & support services.</p> <p>Design of the website is minimal with limited use of colour, graphics or interactive features.</p> <p>Website layout is difficult to navigate but the content is very comprehensive, simple and easy to understand.</p>

Collegedrinkingprevention.gov [US Website]

Name: Collegedrinkingprevention www.collegedrinkingprevention.gov	
Developed by: Task Force on College Drinking which was created by the National Advisory Council on Alcohol Abuse and Alcoholism	
Purpose: to reduce alcohol-related harm	
Targeted: college presidents, parents and college students.	
Topic: Alcohol [College students information]	
Key Characteristics	Additional Information
Content on the website covers alcohol myths effects of alcohol, drinking consequences and alcohol poisoning. Features included a calorie, cost and Blood Alcohol Content calculator and an interactive body which traces the flow of alcohol to see how it affects your organs & systems.	Has an about us/contact us section, sitemap, links to external resources and FAQ. Provides an accessibility, privacy policy, website policies and disclaimer statement. Content is simple and easy to understand, design is simple with limited use of graphics/colour.



Other reliable and trustworthy resources for alcohol health information include the following:

www.alcoholicsanonymous.ie

It is a fellowship of men and women who share their experience, strength and hope with each other in order to overcome their alcoholism and help others to recover from alcoholism.

www.alcoholactionireland.ie

Alcohol Action Ireland was formed in April 2002. It is an independent alcohol interest group comprised of individuals and organisations concerned about the unacceptable levels of inappropriate alcohol use and alcohol-related harm in Irish society.

www.alcoholconcern.org.uk

Set up in 1984 Alcohol Concern is the national voluntary agency on alcohol misuse. Its principal aims are: to reduce the incidence and costs of alcohol related harm and to increase the range and the quality of the services available to people with alcohol-related problems.

www.alcohol-focus-scotland.org.uk

Is a Scottish charity dedicated to raising awareness of and reducing the significant health and social harm caused by alcohol in Scotland.

www.downyourdrink.org.uk/

www.factsontap.org/

Committed to changing attitudes and expectations around youth drinking and drug abuse among college students.

Alcohol websites developed by the drinks industry:

www.drinkaware.ie

www.drinkawaretrust.org.uk


<http://www.drinkaware.co.uk/>

<http://www.truthaboutbooze.com/> [Drinkaware's new site for under 18's]


Appendix (C)

Drug Resources

Drugs.ie

Name: Drugs.ie www.drugs.ie 	
Developed by: Crosscare (Dublin diocese social care agency) drug and alcohol program. Input from the HSE alongside some financial support. Was formerly dap.ie/druginfo.ie	
Purpose: provide quality drug education, training, information and support services.	
Targeted: Young people, professionals and parents. Topic Covered: Drugs	
Key Characteristics	Additional Information
Offers a range of support services: <i>Live help</i> - person on hand to answer questions for free between 9-5pm. <i>Mobile help</i> – facility to get access to information/services on mobile. <i>Local help</i> can find out where local services are for drug and alcohol issues. <i>Phone help</i> –drugs free phone helpline. Use of podcasts & videos to inform people of latest developments and topics related to drugs.	Signposts users to other websites and supports. Have a site search facility, regular and up to date news feeds. Has a disclaimer & privacy statement, sitemap and contact us section. Provides information specifically for parents and professionals also. Content is direct, clear, factual and easy to understand with some use of graphics. Covers general drug information and the various types of drugs.

Drugscope [UK Website]

<p>Name: Drug scope http://www.drugscope.org.uk </p> <p>Purpose: to provide quality drug information, promote effective responses to drug use, undertake research and advise on policy-making and good practice.</p> <p>Targeted: Public including health professional/providers, educators and individuals.</p> <p>Topic Covered: Drug information</p>	
Key Characteristics	Additional Information
<p>Drug database with over 100,000 records of drug literature.</p> <p>Help finder database – contact details and service provision details for drug services and support organisations in the UK.</p> <p>Has an online A-Z encyclopaedia of drugs, covering issues such as history, effects, law and prevalence. Also has a FAQ section on drugs.</p> <p>Information is comprehensive & easy to understand. Website design is simple, limited use of graphics/colour.</p>	<p>Has a wide variety of resources/publications on good practice and research related to key drug issues.</p> <p>Has a drug link blog which discusses drug related issues of topical interest.</p> <p>Get involved section – outlines projects/activities and opportunities in drug fields that people can participate in.</p> <p>Has recent news/events sections, sitemap, terms of use, privacy policy and contact us section.</p>


Talktofrank.com [UK Website]

<p>Name: Talktofrank.com www.talktofrank.com</p> <p>Developed: FRANK is a joint initiative from the Home Office and Department of Health and is supported by the Department for Education and Skills.</p> <p>Purpose: offers a comprehensive range of information and advice about all aspects of drugs.</p> <p>Targeted: Young people</p> <p>Topic Covered: Drugs</p>	
Key Characteristics	Additional Information
<p>Has a comprehensive A-Z drug guide covering issues such as effects, getting hooked, law, appearance, cost, purity and risks.</p> <p>Has polls, links to other resources, frequently asked questions, news and articles section, videos and celebrity stars on drugs section.</p> <p>Website is very interactive - allows users to upload personal stories/comments and has lots of interactive games and activities such as spliff pinball, drugs mug, chemical reactions videos and under the microscope.</p>	<p>Signposts users to local and national support services.</p> <p>Has various other support services such as email, 24 hr helpline number, leaflets and chat facility which is a virtual information bus.</p> <p>Content is direct, clear, factual and portrayed with the use of text, videos, graphics and interactive features.</p> <p>Website design is simple with lots of colour, graphics and is user-friendly. Has a site search facility, sitemap, site policy and accessibility statements. No "about us" section.</p>


Appendix (D)

Sexual Health Resources


Contraception.ie

<p>Name: Contraception.ie www.thinkcontraception.ie</p> <p>Developed by: Crisis Pregnancy Agency</p> <p>Purpose: aims to prevent unplanned pregnancy by reminding sexually active young adults that consistent use of contraception is the most effective way to prevent unplanned pregnancy.</p> <p>Targeted: at 18–24 year olds.</p> <p>Topic: Contraception</p>	
	
Key Characteristics	Additional Information
<p>Addresses the various contraception choices, how to use a condom, myths and facts regarding contraception, emergency contraception, protection against STI's and reproductive health.</p> <p>Design had good use of colour/ pictures, was user-friendly and had no interactive features.</p>	<p>Signposts users to various other websites for further information and to services for contraception, STI and unplanned pregnancy.</p> <p>Has a disclaimer but no about us section, when content was last updated or sitemap.</p> <p>Content was short, simple and easy to understand.</p>

Condom Essential Wear [UK Website]

<p>Name: Condomessentialwear.co.uk http://www.condomessentialwear.co.uk/</p> <p>Developed by: the sexual health professional organisation which is provided by the Department of Health and the Department for Education and Skills, and the NHS.</p> <p>Purpose: provide accurate sexual health information</p> <p>Targeted: Public</p> <p>Topic: Sexual health</p>	
	
Key Characteristics	Additional Information
<p>Has a free sexual health helpline for UK residents.</p> <p>Content covers sexual health facts, the various contraception options and information about infections.</p> <p>Has a frequently asked questions section answered by a sexual health expert, and a quiz.</p> <p>Signposts users to support services for help.</p>	<p>Has a privacy policy, terms and conditions, copyright and accessibility statement. Does not have an about us/contact us section.</p> <p>Content is displayed with text/pictures/videos and is easy to understand – good use of bullet points.</p> <p>Website uses colour and is user-friendly but there are no interactive features.</p>

Red Ribbon Project

<p>Name: Red Ribbon Project www.redribbonproject.com </p> <p>Developed by: formerly known as Limerick Aids Alliance now the Red Ribbon Project.</p> <p>Purpose: provides prevention, care and support services relating to HIV/AIDS and Sexual Health in the Mid West of Ireland.</p> <p>Targeted: Public</p>		
Topics Covered	Key Characteristics	Additional Information
Women's sexual health	<p>Offers a confidential helpline with trained staff.</p> <p>Provide one-to-one counseling on sexual health issues.</p> <p>Signposts users to external resources and support services.</p>	<p>Good use of colour and user-friendly</p> <p>There is no sitemap, disclaimer or privacy statement.</p> <p>Website has no interactive features or graphics.</p>
Men's sexual health		
STI's		
HIV & Aids		

Other reliable and trustworthy resources for sexual health information include the following:

www.sexualityandu.ca

Developed by the Society of Obstetricians and Gynecologists of Canada. It provides credible and up-to-date information and education on sexual health.

www.ifpa.ie

Irish Family Planning Association is a national voluntary organisation promoting sexual and reproductive rights and help. Provides information, support and advice.

www.rcni.ie

Rape Crisis Network provides counseling and therapy for victims of rape, sexual assault, child sexual abuse and sexual harassment in centres throughout Ireland.

www.aidswest.ie

Aids West offers an information helpline, education / prevention services and support to people affected by HIV and to those concerned about their sexual health.

www.sexualhealthcentre.com

It provides information to people who have questions about AIDS, HIV and sexual health issues in general. Offers up-to-date information, useful contacts and confidential advice.

www.brook.org.uk

Provides free and confidential sexual health advice and services specifically for young people under 25.

www.ppositiveoptions.ie

The Crisis Pregnancy Agency provides information on Irish pregnancy counseling.

www.dublinaidsalliance.com

Established in 1987, Dublin AIDS Alliance (DAA) Ltd is a voluntary organisation working to improve conditions for people living with, or affected by, HIV/AIDS

Appendix (E)

Travel Health Resources

Tropical Medical Bureau

Name: Tropical Medical Bureau (TMB) www.tmb.ie Purpose: provides vaccine and health information to travellers. Targeted: Individual and corporate travellers and aid/development agencies. Topic covered: Travel health information	
Key Characteristics	Additional Information
Has medical personnel trained in travel medicine. Provides travel consultations & can make appointments online. Emergency cover 24 hour helpline for travellers when they are away. Interactive map to find nearest travel clinics. Up to date information on any country in the world including a country profile and any health alerts/news travellers need to be aware of.	Provides vaccine information and health reports for any country in the world. Signposts users to other travel health resources and have a contact us section. Provides a legal and privacy statement. Content is short, easy to understand and comprehensive. Design is attractive – good use of colour/graphics Website is very user-friendly.

Fitfortravel [Newzeland website]

<p>Name: Fitfortravel http://www.fitfortravel.nhs.uk</p> <p>Developed by: Team of experts from the Travel Health division at Health Protection Scotland (HPS).</p> <p>Purpose: gives travel health information for people travelling abroad from the UK.</p> <p>Targeted: All travellers.</p> <p>Topic covered: Travel health information</p>		
Some Topics Covered	Key Characteristics	Additional Information
Travel vaccines/ malaria	<p>Travel vaccine requirements listed by country with interactive maps.</p> <p>Updated health alerts/news for travellers.</p> <p>A-Z index feature for quick access to information.</p> <p>Provides links to other useful resources.</p> <p>Provides advice on range of topics, such as disease prevention, malaria and yellow fever.</p>	<p>Have accessibility, privacy, disclaimer and copyright statements.</p> <p>Content is easy to understand and up to date.</p> <p>Good use of colour and some use of pictures.</p> <p>Website is user-friendly, has a sitemap and design is simple.</p>
Insect & animal bites		
Yellow Fever/Diarrhoea/		
First Aid/Jet lag/pregnancy		
Blood/insect Bourne & STD's		
Purifying water/accidents		
Insect & Animal Bites		
Sun exposure/medications		

Travel Doctor.co.uk [UK website]

<p>Name: Travel Doctor http://www.traveldoctor.co.uk/</p> <p>Developed by: A fulltime doctor and pharmacist in the UK [credentials provided]</p> <p>Purpose: provides general health advice and information to travellers before, during & after travel.</p> <p>Targeted: All travellers/holidaymakers. Topic covered: Travel health information</p>		
Some Topics Covered	Key Characteristics	Additional Information
Travel vaccines/Diseases	<p>Provides travellers with personalised lists of travel medicines tailored to individual trips if you fill in a questionnaire.</p> <p>Can also provide people with a travel doctor manual regarding travel medications.</p> <p>Website is very interactive and user friendly.</p> <p>Travel vaccine requirements by countries with interactive maps.</p>	<p>Statements regarding privacy and a disclaimer provided.</p> <p>Information is extremely comprehensive, up to date and referenced.</p> <p>Good use of graphics – colour and pictures.</p> <p>Has a search facility, weather reports, videos and links to various resources.</p>
Useful travel tips/Malaria		
Flight problems/Yellow Fever		
Respiratory infections		
Blood Borne & STD's		
Insect Borne Diseases		
Insect & Animal Bites		
Accidental Hazards/First Aid		
Sunburn/ Heatstroke/Altitude		

Centre for Disease Control & Prevention [USA Website]



<p>Name: Centre for Disease Control & Prevention http://wwwn.cdc.gov</p> <p>Developed by: U.S. Department of Health & Human Services</p> <p>Purpose: Provides users with credible & reliable information on travel health alongside other topics.</p> <p>Targeted: health providers/professionals, students, educators, policy makers, scientists and researchers.</p> <p>Topic covered: Travel health information</p>		
Some Topics Covered	Key Characteristics	Additional Information
Travel immunisation	Travel and health information for all countries.	Statements regarding policy and regulations, accessibility, privacy and a disclaimer provided.
Travel illnesses and diseases		
Useful travel tips	Travel vaccine requirements and extensive list of travel illnesses and diseases.	Information is extremely comprehensive, up to date and referenced with links to sources
Safe food & water guidelines		
Injury and illness abroad	Signposts users to nearest medical centres	Had a search facility, a-z index, choose language, frequently asked questions, sitemap, contact us and about us
Avian Influenza & travel		
Insect & Animal Bites	Travel notices, health alerts, outbreaks and health warnings are provided.	
Yellow fever		

Appendix (F)

Mental Health Resources

Mental Health Ireland

<p>Name: Mental Health Ireland www.mentalhealthireland.ie</p> <p>Developed by: Mental Health Ireland</p> <p>Purpose: aims to promote positive mental health and to actively support persons with a mental illness, their families and carers by identifying their needs and advocating their rights.</p> <p>Targeted: General public</p> <p>Topic: Mental health</p>	
Key Characteristics	Additional Information
Provides mental health information such as mental illness, stress and where you can go to get help.	Has an about us/contact us section, disclaimer and mission statement. Also contains a search facility, polls, news and events section. Signposts user to external resources.
It has publications of mental health literature.	
It has a project and activities section which outlines what is currently happening.	


Your Mental Health

<p>Name: Yourmentalhealth www.yourmentalhealth.ie</p> <p>Developed: as part of the 'Your Mental Health' awareness campaign. The campaign and this website are coordinated by the National Office for Suicide Prevention.</p> <p>Purpose: To improve awareness and understanding of mental health and well-being in Ireland.</p> <p>Targeted: Public</p> <p>Topic Covered: Mental Health</p>	
Key Characteristics	Additional Information
<p>Had a support services section for mental health and other topics such as bereavement, sexuality, alcohol and eating disorders.</p> <p>It has a search facility, Bebo page, quiz, did-you-know facts and campaign video.</p> <p>Highlighted simple things people could do to improve mental health and cope with problems.</p>	<p>Can adjust font size. Has a disclaimer statement & sitemap</p> <p>Design is simple and easy to navigate [not very interactive].</p> <p>Content is comprehensive, positive, simple and easy to understand.</p> <p>Gave a brief description of mental health problems and their symptoms.</p>

Rethink.org [UK website]

<p>Name: Rethink.org www.rethink.org</p> <p>Developed by: Formerly known as National Schizophrenia Fellowship, renamed in 2002 to Rethink, a leading mental health charity.</p> <p>Purpose: provide practical support and services, campaigning, policy development, research, education and training and provide information.</p> <p>Targeted: General public</p> <p>Topic: Mental health</p>	
Key Characteristics	Additional Information
<p>Information covers what is mental illness and how to live with it i.e. treatments and therapy.</p> <p>Has a search bar facility, latest news and "what's new" sections.</p> <p>Has an a-z index, feedback section, and personal stores section.</p>	<p>Has a contact us, about us, sitemap, accessibility and privacy statements.</p> <p>Also has a discussion forum and facility to allow people get involved.</p> <p>Design is colourful and website is easy to navigate.</p> <p>Find services facility with interactive/colour map.</p>

Halfofus.com [American Website]

	
Name: Half of us www.halfofus.com	
Developed by: MTV and the Jed Foundation	
Purpose: raise awareness about the prevalence of mental health issues on campus and connect students to the appropriate resources to get help.	
Targeted: College Students	
Topic: Mental health	
Key Characteristics	Additional Information
Covers content such as depression, bipolar, suicide, alcohol/drugs, eating disorders, anxiety disorders, stress and self-harm. It has many videos of people's own personal experiences with mental health issues, including celebrities and students. Has a "Find Help" section – for resources within college campuses and in general.	Has terms of use, privacy policy, about us section, feedback feature and copyright policy. Has a mental health screening tool which is approx 5-10 minutes long and was developed by Duke University medical centre. Website is interactive and uses graphics well. Content was simple and easy to understand.

Other reliable and trustworthy resources for mental health information include the following:

www.tcd.ie/Student_Counselling/

www.samaritans.org

Samaritans provides confidential non-judgmental emotional support, 24hours a day for people who are experiencing feelings of distress or despair, including those which could lead to suicide.

www.grow.ie.

Grow is a mental health organisation which helps people who have suffered, or are suffering from mental health problems.

www.nosp.ie

Oversee the implementation of 'Reach Out' the National Strategy for Action on Suicide Prevention and co-ordinate suicide prevention efforts around the country.

www.amh.org.uk

Action Mental Health works to improve the health & wellbeing of people with mental health needs or learning disabilities.

www.headstrong.ie

Headstrong is an independent NGO which works to ensure that young people (aged 12-25) are better supported to achieve mental health and wellbeing.

www.aware.ie

Was developed by a group of interested patients, relatives and mental health professionals. It provides support & assistance to people whose lives are affected by depression.

www.console.ie

Supporting and helping people bereaved through suicide. It also promotes positive mental health within the community in an effort to reduce the high number of attempted suicides and deaths through suicide.


www.livinglinks.ie

Trained volunteers offer confidential, practical support and advice to families who have experienced a death by suicide in a number of counties.

Appendix (G)

Eating Disorder Resources

Bodywhys

Name: Bodywhys www.bodywhys.ie 	
Developed by: the Irish National Charity Bodywhys	
Purpose: offers support, information and understanding for people with eating disorders, their families and friends.	
Topic: Eating Disorders	
Key Characteristics	Additional Information
<p>Has a wide variety of support services such as: National Helpline, local support groups, email support service and weekly online support meetings.</p> <p>Covers general information on eating disorders, anorexia, bulimia, binge eating, males and eating disorders and treatment options.</p> <p>Signposts users to a directory of treatment services in Ireland and support organisations/websites.</p>	<p>Has a moderated forum, personal stories section, frequently asked questions, videos and podcasts, search site facility, feedback section and latest news/events.</p> <p>Has a privacy policy and an “about us” section.</p> <p>Website is easy to navigate, colourful and interactive.</p> <p>Content is clear, simple and easy to understand.</p>

Other reliable and trustworthy resources for eating disorders include the following:

www.b-eat.co.uk

Is a national charity based in the UK providing information, help and support for people affected by eating disorders and, in particular, anorexia and bulimia nervosa.

www.somethingfishy.org

Comprehensive website with lots of general information including signs/symptoms and a chat room. It advocates itself as pro-recovery and doesn't allow any information about diets, weight loss tips or even pictures to be exchanged.

www.edauk.com

Website of the Eating disorders Association in the UK. Has lots of general information on all aspects of eating disorders. Also contains a section specifically for younger people.

Appendix (H)

Nutrition Resources

<http://www.indi.ie/> [Website of Irish Nutrition and Dietetics Institute]

www.bda.uk.com/ [British Dietetic Association]

www.nutrition.org.uk [British Nutrition Foundation]

www.eufic.org [The European Food Information Council]

<http://www.nal.usda.gov/fnic/dga/index.html> [National Agricultural Library USA]

<http://www.nnsc.ie> [Nutrition Surveillance Centre UCD]

[The Vegetarian Society of the UK](http://www.thevegetariansociety.org.uk)

(Appendix I)

Priority List of Topics for Proposed Desktop Project

These proposed topics for the content incorporates both the students and steering group suggestions, as well as content topics that we came across while reviewing the evidence based websites in the literature review.

Alcohol

- ❖ Prevalence - College Drinking Statistics.
- ❖ Alcohol licensing laws / College Alcohol Policies
- ❖ Alcohol Facts and Myths.

- ❖ What is alcohol?
 - How is it made.

- ❖ What is a drink?

- Standard Drinks.
 - Units [what are they/calculating units/in practical terms].
 - Strength /Volumes of specific drinks.
 - Drinking guidelines/recommendations/ binge drinking.
 - Alcohol and you (how much do you drink?)
- ❖ Alcohol Effects
 - Short term effects.
 - Long term effects.
- ❖ Alcohol and Mental Health.
 - ❖ Alcohol and Sexual Health.
 - ❖ Alcohol and Gender.
 - ❖ Alcohol and Weight.
 - ❖ Effects of Mixing Drinks.
 - ❖ Alcohol and Smoking.
 - ❖ Alcohol and Athletes.
 - ❖ Alcohol and Energy Drinks.
 - ❖ Alcohol and Pregnancy.
 - ❖ Alcohol and Drink Driving.
 - ❖ Alcohol and Illegal Drugs.
 - ❖ Alcohol and Medication.
 - ❖ Alcohol Poisoning.
 - ❖ Alcohol Related-Harm.
 - ❖ Alcoholism.
- ❖ Alcohol General Advice [students wanted a harm reduction approach]
 - Tips on how to moderate drinking or cut back.
 - Tips on what to do before and while drinking in order to avoid hangovers.
 - Dealing with a hangover/hangover cures.
 - Alcohol and personal safety – minding drinks etc.
 - How to help a friend with an alcohol problem.
- ❖ Provide Non-Alcohol Alternatives [within college and local area]
 - How to have fun without booze

- Green spaces/parks
- Slí na Sláinte walkways
- Cinema

- ❖ Alcohol Industry
 - How it works.
 - Being advertising aware

- ❖ Frequently Asked Questions
- ❖ Links to national and local support services.

Drugs

- ❖ Prevalence
- ❖ Drug Laws
- ❖ Facts and Myths

- ❖ Classes / Types of drugs [A-Z Index]
 - Prevalence and statistics.
 - Legal status of drugs.
 - What are they?
 - Scientific/trade slang name.
 - Appearance – (drug images).
 - Risks.
 - Short term effects.
 - Long term effects.
 - How long it stays in your system.
 - Methods of use.
 - Cost.
 - Signs and Symptoms.
 - After effects
 - Dependency.
 - Overdose.

- ❖ How to help a friend with a drug problem.
- ❖ Drug Driving.
- ❖ Drugs and Sport.
- ❖ Criminal Side of Drugs.
- ❖ Frequently Asked Questions.
- ❖ Links to national and local support services.

Sexual Health

- ❖ Laws.

- ❖ Contraception
 - Myths and Facts

- ❖ Contraception Choices
 - Description [pictures].
 - How they are used/work.
 - Advantages/Benefits.
 - Side effects.
 - Effectiveness %.
 - Cost.

- ❖ Emergency Contraception
 - Description.
 - How they work.
 - Where to get them.
 - Side effects.
 - Cost

- ❖ Condom Tips
 - How to use them

- ❖ Pharmaceutical Legislation (buying the pill online).
- ❖ Breast Awareness
- ❖ Having a smear test
- ❖ Examining your testicles

- ❖ Pregnancy

- ❖ STI/Infections
 - Prevalence
 - Facts and Myths
 - Description
 - How you can contract it
 - Signs and Symptoms
 - Short and long term effects.
 - Diagnosis and Treatment

- ❖ HIV
 - Prevalence.
 - Facts and Myths.
 - Description of HIV and Aids
 - How is it contracted?
 - Signs and Symptoms
 - Long and Short term effects
 - HIV and Sex
 - Prevention and condoms
 - HIV and Blood
 - Testing for HIV

- ❖ Frequently Asked Questions.
- ❖ Links to national and local support services.

Mental Health

- ❖ Tips to keep mentally healthy.

- ❖ Mental Illness
 - Prevalence
 - Myths and Facts
 - Who does it affect?
 - What causes mental illness?

- ❖ Mental Illness and Disorders
 - Brief description
 - Signs and symptoms
 - Long and short term effects

- ❖ Living with mental illness.
- ❖ Stigma and mental illness.

- ❖ Stress
 - Prevalence
 - Facts and Myths
 - Signs and symptoms
 - Long and short term effects
 - Preventing stress
 - Managing stress
 - Exam stress

- ❖ Suicide
 - Prevalence
 - Facts and myths of suicide
 - Recognising a high risk of suicide
 - How to help a suicidal friend/relative
 - Suicide bereavement

- ❖ Panic attacks
- ❖ Bereavement
- ❖ Bullying
- ❖ Harassment
- ❖ Depression
- ❖ Self harm
- ❖ Eating disorders
 - Prevalence.
 - Facts and myths.
 - Description of the different types.

- Signs and symptoms of an eating disorder.
- Eating disorder health problems.
- Effects of an eating disorder.
- Prevention and treatment.
- Recovering from eating disorders
- ❖ Frequently Asked Questions.
- ❖ Links to national and local support services.

Travel

- ❖ Country requirements and vaccine information
 - Precautions
 - How they work
 - What they protect against
 - How long they last
- ❖ Health Alerts.
- ❖ Sun safety/heatstroke.
- ❖ Travel and sexual health.

- ❖ General Travel Advice
 - Traveller's diarrhoea
 - Deep Vein Thrombosis

- ❖ Traveller Diseases
 - Prevalence
 - Facts and myths
 - Description
 - Signs and symptoms
 - Prevention
 - Treatment

- ❖ Insect Bites
 - Description
 - Prevention
 - Treatment

- Do's and Don'ts
- ❖ Frequently Asked Questions.
- ❖ Links to national and local support services.

Nutrition

- ❖ Healthy Eating
 - Healthy eating guidelines/recommendations
 - What food you should avoid.
 - What foods are good for you.
 - Benefits of healthy eating [physically/mentally]
 - Effects of bad eating in college
 - Tips for healthy eating
 - Food conditions and allergies
- ❖ Student Recipes
 - Cheap.
 - Easy to make.
 - Healthy.
 - Vegetarian and vegan recipes
 - Vegetarian information
- ❖ List of local healthy and cheap places to eat.
- ❖ What are the healthiest options in terms of fast food?
- ❖ Benefits of Water
- ❖ How to read a food label
- ❖ Food safety

Exercise and Physical Activity

- ❖ Physical Activity Guidelines
- ❖ Benefits of exercise
- ❖ Different types of stretches and exercises.
- ❖ Health risks from inactivity
- ❖ Tips on how to incorporate physical activity into daily life.
- ❖ Exercise Addiction

- ❖ Foods to eat before and after physical activity.
- ❖ Frequently Asked Questions.
- ❖ Links to national and local support services and facilities.

Sexuality

- ❖ Bisexual
- ❖ Coming out
- ❖ Gay and lesbian
- ❖ Heterosexual
- ❖ Homophobia
- ❖ Transgender
- ❖ Rights and responsibilities

- ❖ Frequently Asked Questions.
- ❖ Links to national and local support services

Others

- ❖ First aid
- ❖ Disability
- ❖ First year information – how to survive moving away from home.
- ❖ Asthma attacks

(Appendix J)

Proposed Features for Desktop Project

Design needs to be technically accessible, have multiple platform compatibility and compatible with all screens and browsers.

Interactive Features

- ❖ Forum
 - Ask questions to professionals
 - Moderated
 - Ensure confidentiality/anonymity

- ❖ Video/Podcasts
 - Contain young people.
 - Tell personal stories.
 - Portray different scenarios with a key message behind it.
- ❖ Feedback and/or suggestion button feature.
- ❖ Recent news/events section
- ❖ Personal stories section
- ❖ Competitions
- ❖ Questionnaires
- ❖ Quizzes
- ❖ Games
- ❖ Polls
- ❖ Case studies
- ❖ Frequently Asked Questions
- ❖ Pictures and some use of cartoons not too many.
- ❖ Available in different languages especially Irish
- ❖ Maps – to find support services.
- ❖ SMS and Email Support

Features to ensure content is presented in the shortest possible way:

- ❖ Links
- ❖ Bullet points
- ❖ Headings
- ❖ Quick Facts

Features to ensure the content is presented in a User-Friendly way:

- ❖ Sitemaps – preferably down the side.
- ❖ Excellent navigation system
- ❖ Clickable topics
- ❖ Site specific search facility
- ❖ Big font – preferably Ariel font.
- ❖ A-Z Index
- ❖ Search facility on the website
- ❖ Use of colour and images

Specific Alcohol Features

- ❖ Audit Questionnaire
- ❖ Blood Alcohol Calculator
- ❖ Unit Calculator
- ❖ Alcohol Calorie Counter
- ❖ Alcohol Cost Calculator
- ❖ Interactive bodies – shows the flow of alcohol through the body and see how and where it affects your organs and systems.
- ❖ Booze quizzes
- ❖ Alcohol Myths/Facts

Base Sections

- ❖ Contact Us
- ❖ About Us
- ❖ Privacy Policy
- ❖ Accessibility
- ❖ Copyright
- ❖ Disclaimer
- ❖ Local support and services section

Appendix (K)

Focus Group Discussion Guide

Introduction

- Welcome everyone & thank them for attending.
- Introduce Moderator and Assistant Moderator.
- Explain the purpose of the study and the focus group (read information sheet).
- Explain that there is no correct answer - just want their opinions.
- Explain that confidentiality and anonymity will be ensured and that no link will be made between any individual and the data.
- Present dictaphone and confirm permission to record the discussion.
- Ask everyone to speak one at a time.
- Get everyone to fill in the short criteria form.
- Get verbal consent that they still want to voluntarily participate in the study.

Equipment Required

Recorder	Information sheet for each student
Criteria form for each student	Pens
Watch	Water & paper cups.
Tea/coffee & sandwiches.	

Focus Group Questioning Route

Accessibility

Question 1: Where do you think students get their information regarding health matters?

Content

Question 2: What type of topics do you think students would like to see addressed on the website?

Presentation

Question 3: How do you think students would like this website and it's content to be presented?

Show them some websites

Question 4 We will now show you some websites and you can tell us what you think of them?

Examples:

1. SpunOut www.spunout.ie
2. Drink Aware www.drinkaware.ie
3. InfoScotland http://www.infoscotland.com/alcohol/CCC_FirstPage.jsp

Structure

Q.5 What do you think would be the most appropriate way for students to access this website?

Advertising

Q.6 What do you think would be a good way to make students aware of this website?

General

Q. 7 What do you think about this type of project?

Q.8 Do you think students would utilise this type of web-based resource in order to access health information?

Appendix (M)

Letters sent to the president of each college informing them about the project.



Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

Health Promotion Research and Development
Population Health Directorate
Health Service Executive
Parkview House
Pery Street
Limerick
Tel: 061 483215 / 8
Fax: 061 483356

21/02/08

Dear

Re: Student Desktop Health Promotion Project

As you may know, Student Health and other representatives from three key Irish universities – your own, UCC and NUI Galway, have had a series of meetings with me to specify a joint project on computer access to health information and support for students.

One innovatory proposal in the project is the use of an ‘always-on’ prompt on the desktop of computers accessed by students. This would encourage access both to current HSE communications and also a wide range of other links and information, both university-based and nationally-available. A similar project has worked successfully in Scotland for many years.

The HSE has provided initial funding to recruit a co-ordinator, Ms. Priscilla Doyle, based in the Health Promotion Research Centre, NUI, Galway, and each participating university has provided matched resources. Work has already begun on assessing students’ interest in this approach.

My purpose in writing to you is two-fold: to notify you of the HSE’s support for this initiative; and to ask you to do what you can to enlist the support of key departments within your university, e.g. in computer services and library services.

Your staff contact for this initiative is:

My thanks to Student Services staff for their interest in the project and I hope that it is only the beginning of our health-promoting work together.

Yours sincerely,

Brian Neeson,
Functional Manager – Health Promotion Research & Development