



Technology Enhanced Learning



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Introduction

Students coming to Leeds Medical School can expect a MBChB curriculum enhanced by the thoughtful integration of the latest research-led advancements in learning technology.

We engage students with a comprehensive range of educational resources to compliment every aspect of the course - mobile learning, e-Portfolio, simulated learning, decision making careers software, eBooks with quizzes and videos, 360 degree virtual tours for orientation.

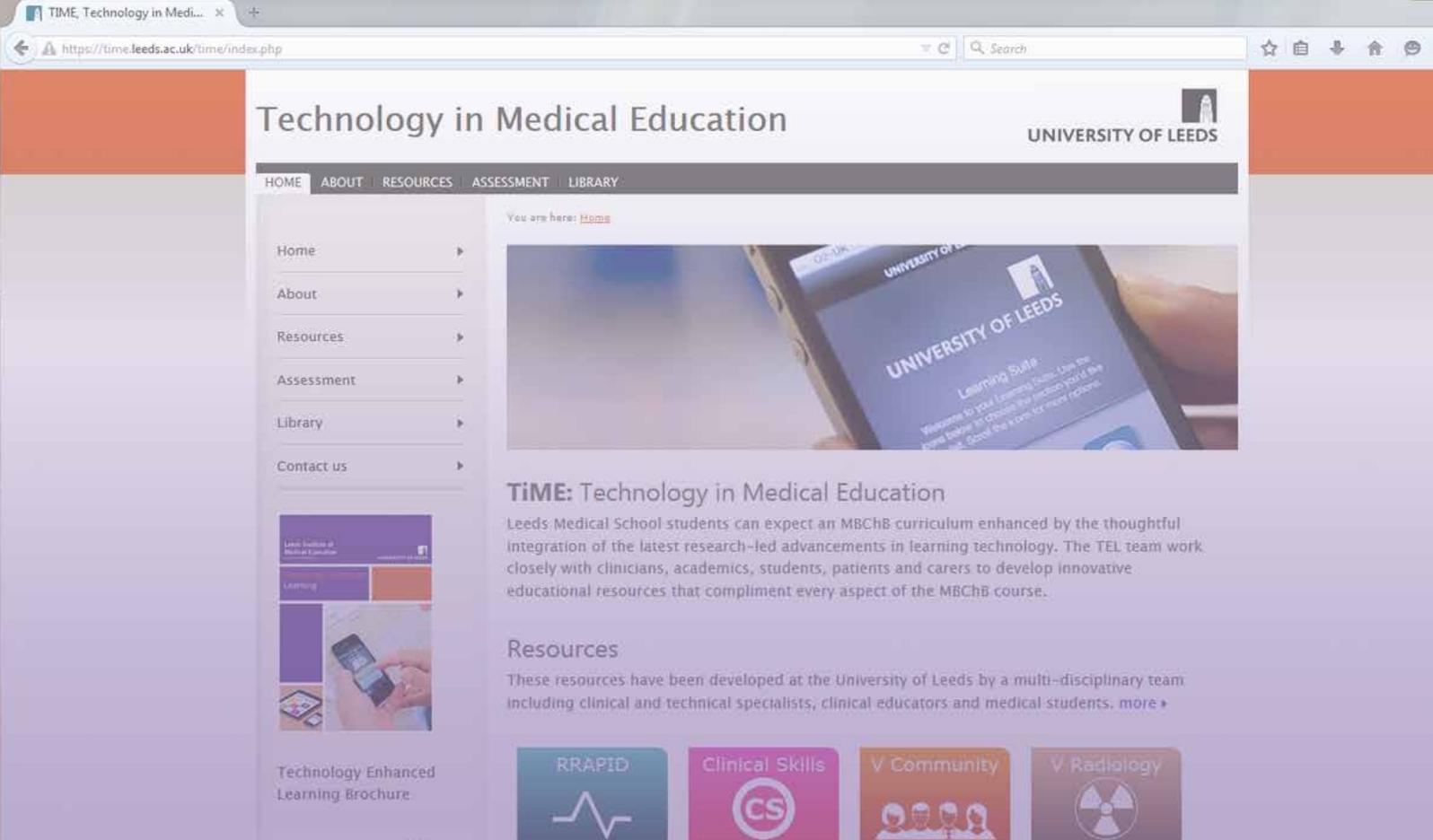
We aim to maximise learning opportunities regardless of location with content available on and offline in a variety of formats for smartphone, tablet, and PC. Through technology we ensure that students are supported equally on campus and out on placement.

Use of cutting edge technology enhanced learning equips

our students with the skills to progress to Foundation Year and beyond to specialty selection and training. At Leeds we acknowledge that students should be able to direct their learning with tailored solutions preparing them for professional revalidation and life-long learning.

To suit the more enquiring mind we provide opportunities for greater involvement and self-development through contributions to special interest groups where they can affect change in the curriculum. We also have many opportunities for students to contribute to educational material for national and international academic audiences including the creation of apps.

In the following pages our dedicated Technology Enhanced Learning (TEL) Team will showcase the developments which make the Medicine programme at Leeds one of the most innovative in the country.



TiME Website – Technology in Medical Education

The TEL team in LIME have worked with clinicians, clinical educators and medical students to produce a vast array of resources developed to support student learning. These resources are available to students through multiple avenues such as the VLE, the Apple app store or through dedicated project web sites.

The TiME website was developed to provide a clear and simple method of accessing the large number of resources developed to support the teaching on the MBChB. It is the single point for finding Technology Enhanced Learning resources for the Leeds MBChB. Where some of the content is curriculum or content sensitive, TiME provides access to demonstration content that can be used to understand and evaluate a resource against a potential need and the full content is available through a University of Leeds login area.

The TiME website is available now at:

<https://time.leeds.ac.uk>



The Undergraduate Story

Phil is a year 5 student. He was offered a university device at the beginning of year 4, but chose to use his own as he already had a compatible model. He has been using resources on his device to support his learning and assessment since year 2, and finds having a variety of applications on his device useful for making the most out of his time in placement settings. He uses the progress file application to make reflections about what he has seen during his day:

“I think it is better than going online because if you are just going to sit there...you can just sit there and take ten minutes and just submit it, rather than sort of having to remind yourself later which is when you then forget it.”

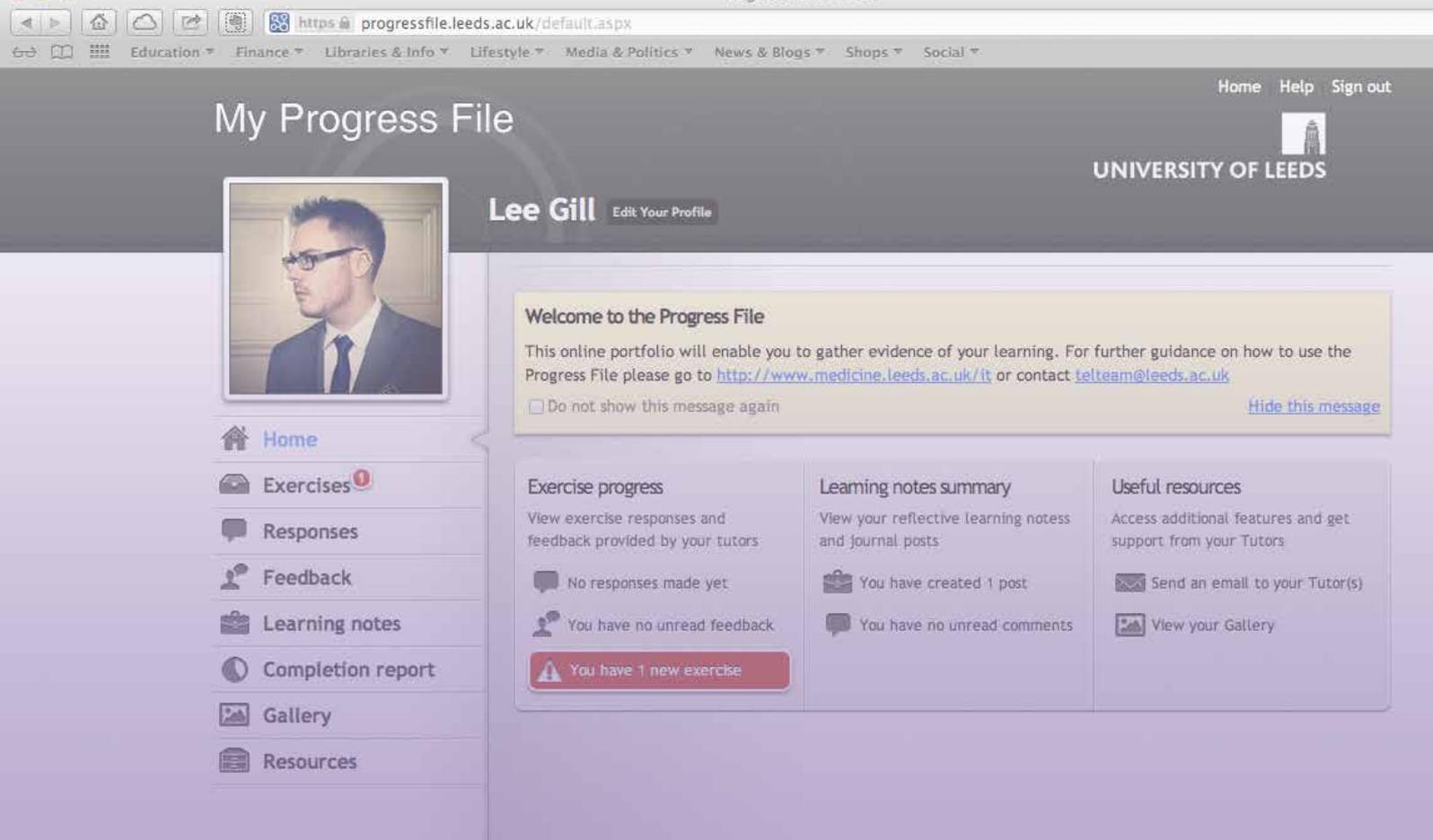
The range of resources made available to students enables them to personalise their own learning experiences, and use them in whichever way they feel most comfortable. Phil's colleague Jamie, for example, prefers to use the resources in a different way:

“Personally I find when you do reflection tasks it's better to do it in a separate environment when you're sitting comfortably in front of a computer so you're doing it

yourself, you can see what you're writing and you're in control of it.”

Phil also benefits from the resources on his phone by being able to access them at times when he would not usually have access to any other learning resources; and he makes full use of the 'just in time' learning opportunities that having the resources enables:

“Lots of times on trains, buses, sitting in cafes, and I've always got my phone on me. It's like having a library and a teacher there with you in your pocket...In some situations it's actually really useful because especially for oncology or something like that, knowing different types of cancer drugs and cancers, when you go and speak to a patient, it's nice if they think that you know a bit about the medication, so if you've just read up on your phone before...I can remember this really rare cancer and no-one really knew about it on the ward, but they all just checked it on their phones. Because you've got the phone you can just search it yourself, so before you go and speak to them you can just find out a bit.”



MBChB Mobile: Progress File

✉ Nancy Davies

At Leeds we aim to produce the Doctor of Tomorrow, a reflective practitioner who naturally engages in lifelong learning practices and understands the importance of professional re-validation.

The Progress File is our online portfolio system. Supporting a personalised learning approach students collect a variety of content, a combination of set exercises, files, websites and diary entries, they have identified as evidence of their learning. At its heart are frameworks detailing the knowledge and skills needed to become a doctor and through a combination of small group teaching and placement experience students gather evidence of how well they are achieving these goals.

The system is a central location for the student to store work over their 5 years, it is also available whilst intercalating. It has ample space for students to reflect upon their learning

in private although there is always the option to share with their personal or course tutors. Content that has been shared with a tutor has the facility for feedback to be given both by tutor and student enabling a dialogue to occur and be captured as evidence. Since 2009 over 2200 students have used the Progress File, enabling us to refine the way we integrate the system into the curriculum.

Our mobile learning programme fully integrates with the Progress File. Students are able to capture and record achievements and thoughts no matter where they are, encouraging students to learn in the moment as a form of primary reflection and also revisit that work for secondary deeper reflection. These mobile work based assessments are all recorded directly into the progress file to build up a picture of the students development whilst on placement.

The use of the Progress File, particularly in conjunction

with graduate style exercises, has been introduced because it helps prepare students for the transition to Foundation Years and professional practice. With the growing emphasis on revalidation this style of capturing learning is increasing across the whole medical profession and we see it as key to prepare our students for this aspect of their career. Access to the Progress File is provided beyond the lifetime of the MBChB into the Foundation Years to encourage continued reflection and learning.

I find the progress file interesting because you can just jot down any learning needs, similar to the way I use my own portfolio. When I see a patient and think “oh I’m not quite sure about that” I’ll jot that down as a learning need and then you can document where you’ve read about it and use those as evidence for your appraisal and I see some of the progress file for that, just little bits, you know instead of writing them on a scrap of paper. So I encourage the students to use it in that way

(GP, Clinical Teacher)





MBChB Mobile: Workplace Based Assessments (WBAs)

✉ Viktoria Joynes

Workplace Based Assessments (WBAs) and Mini-CEX (Mini-Clinical Evaluation Exercise) are a proven method of assessing core competences in the health professions. While the Mini-CEX had more usually been used in postgraduate medicine, their use in assessing undergraduate performance has been increasing since the mid-2000s. These self-directed, formative assessments are ideal for students who need to track their progress throughout their placements; allowing students to identify both their strengths and areas for development while receiving instant feedback on their performance and providing space for self-reflection.

Resource design

While the concept of WBAs has been established and proven for a number of years, these have typically been carried out on paper. In 2009 the decision was made in Leeds to 'mobilise' these resources in order that



students could complete WBAs on their mobile devices. Subsequently an iPhone-based application that allows students to complete the assessments on their mobile devices was built. Mobilising the resource is viewed as advantageous for a number of reasons, including that completed WBAs can be saved straight into e-portfolios allowing students to collect evidence of progression. It also means that university administrators and tutors are able to monitor the progress of students while they are out on placement instead of waiting until the end of placement or end of year to establish if students require any additional support.

Resource Impact

The structured, formative nature of the assessments combined with it's opportunistic nature have resulted in consistent, high quality feedback that has allowed students and staff to review student progress throughout their year 4 and 5 placements and shape the direction of their learning accordingly. Both year 4 and year 5 students now consistently complete more than the minimum required number of assessments. In the 2012-13 academic year

alone, 276 year 5 students completed 3514 Mini-CEX and 269 year 4 students completed a total of 7141 WBAs resulting in a total of 10,655 items of recorded feedback from clinicians (an average of 12.7 per year 5 student, and 26.5 per year 4 student).

Obviously one of the benefits of having the Mini-CEX app and the WBA app was that you could do it there and then, you could pin someone down and say “oh would you mind doing this for me?” or they would even say “we can spend five minutes at the end - we'll do this and then we'll take five minutes and I can do an assessment for you”.

(Leeds Graduate 2011)





RRAPID

✉ Dr Sue Bickerdike

The Recognising and Responding to Acute Patient Illness and Deterioration (RRAPID) programme is an innovative vertical strand of the Leeds MBChB curriculum. Consequently, RRAPID is taught throughout all 5 years of the degree, it uses predominantly simulation based teaching methods.

Background

The philosophy of the RRAPID programme is to emphasise timely recognition and rapid response to the acutely ill patient and to equip undergraduate and postgraduate medical trainees with the appropriate skills to manage such patients. The TEL team collaborated with a multidisciplinary team of clinicians and clinical educators to develop the RRAPID eBook and iPhone app to provide mobile and interactive resources suitable for this purpose. Both the eBook and the iPhone app are available for free

on the AppStore. Additionally, the eBook can be accessed at <http://rrapid.leeds.ac.uk/ebook/>. For more information about RRAPID please visit rrapid.leeds.ac.uk.

Resource design

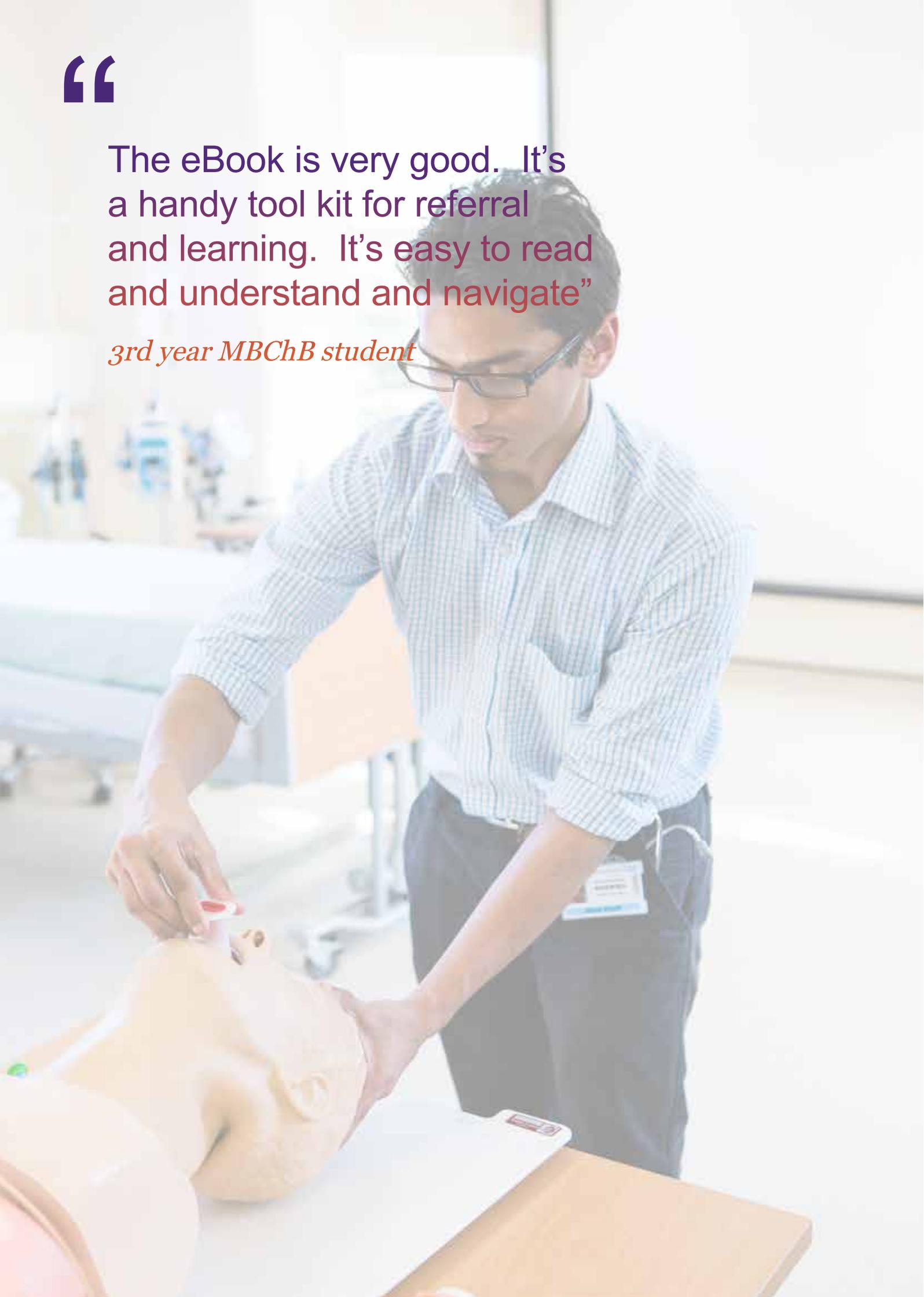
Both the RRAPID eBook and iPhone app revolve around



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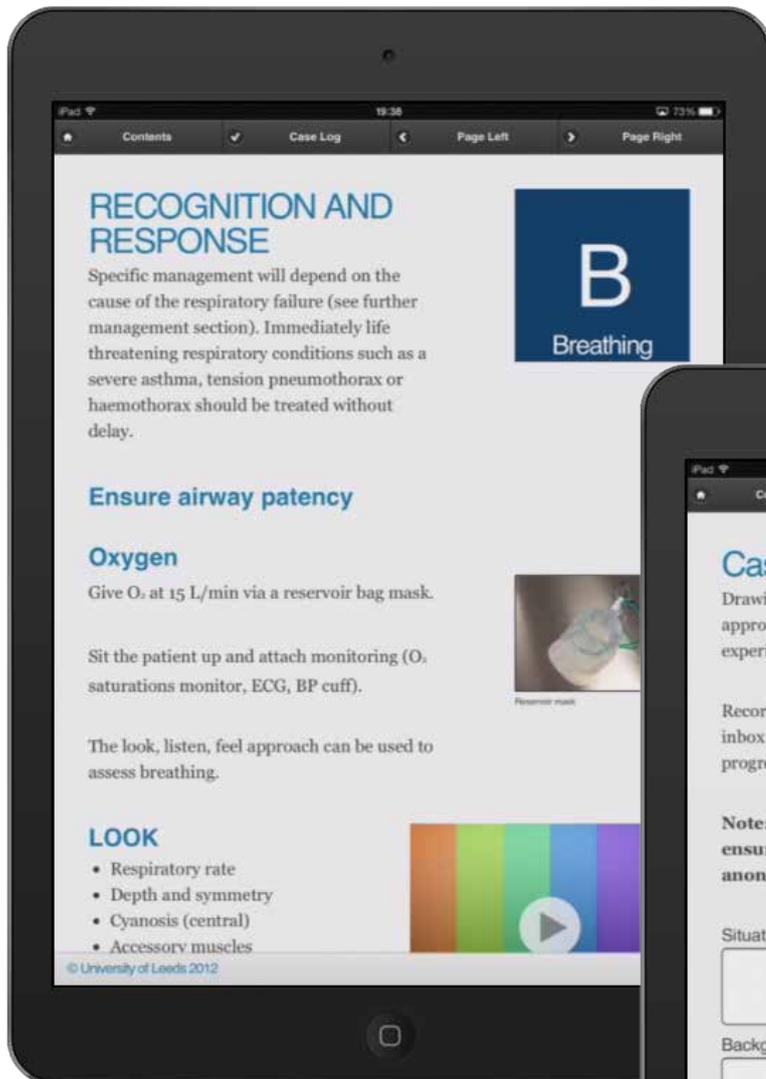
The eBook is very good. It's a handy tool kit for referral and learning. It's easy to read and understand and navigate”

3rd year MBChB student

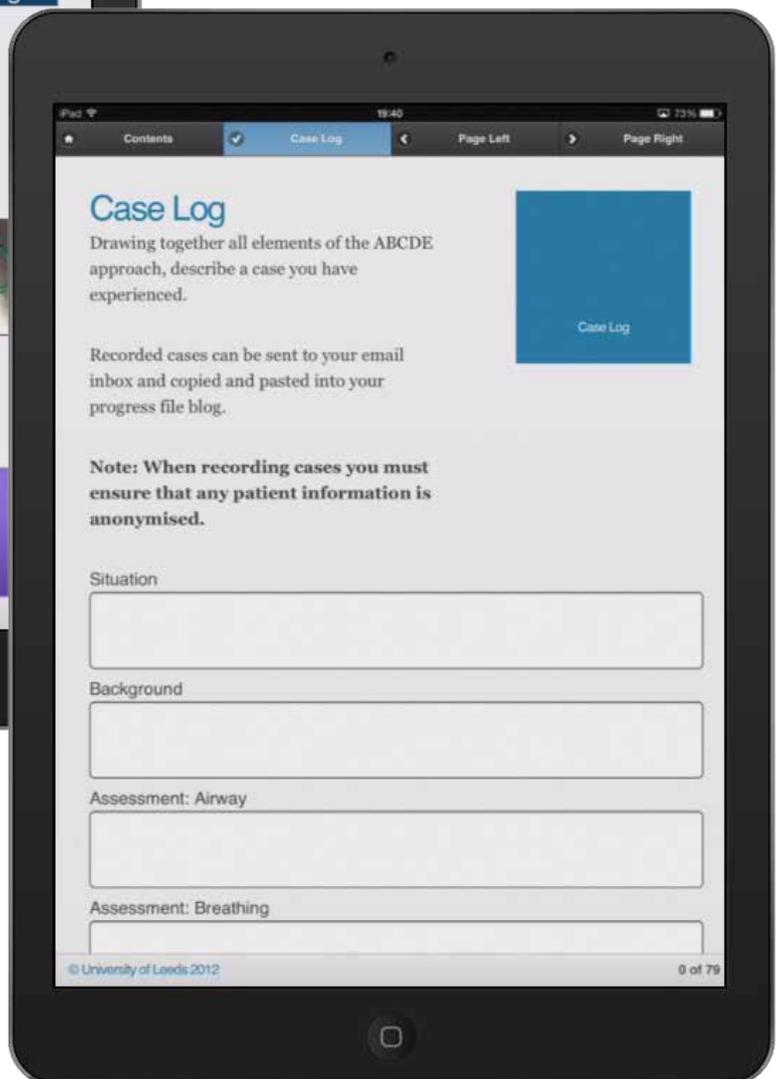


the traditional ABCDE approach (1.Airway, 2.Breathing, 3.Circulation, 4.Disability, 5.Exposure) in assessing the acutely ill patient. The RRAPID eBook is a multimedia book ideal for learning about the recognition of and response to acutely ill patients. It details basic anatomy and physiology, common causes of system dysfunction, clinical presentation, and the immediate recognition of and response to acute patient illness. It further describes the continuing management of the patient and the principles underlying the prevention of future episodes of patient

deterioration. The eBook includes video demonstrations and photographs to provide visual aids throughout. It also contains case-studies at the end of each section, multiple choice questions and interactive patient scenarios to enable the reader to test their RRAPID understanding. Additionally, there is also a case-log feature that allows the trainee to draw together aspects of the ABCDE approach to describe cases they have experienced for future reflection.



The eBook includes a case-log facility to enable students to log and reflect on patient cases they have observed. It uses the SBARR communication tool to structure the students reflections and so can also be utilised as a tool to practice patient handover.



The eBook includes several photos and videos to support the simulated teaching material used within the RRAPID programme. These tools allow the student to familiarise themselves with necessary equipment and procedures they may be required to know within an acute setting.

The RRAPID iPhone app is complimentary to the eBook and provides a more concise tool ideal for use as a quick reference guide within the clinical setting. It has a similar structure to the RRAPID eBook but displaying the content in check-list format. The iPhone app includes a section on how to manage medical emergencies, incorporates calculators for immediate patient assessment and management tools such as NEWS (National Early Warning Score), GCS (Glasgow Coma Score) and AKI (Acute Kidney Injury), and also allows users to link to their essential clinical contacts from within the app.

Resource impact

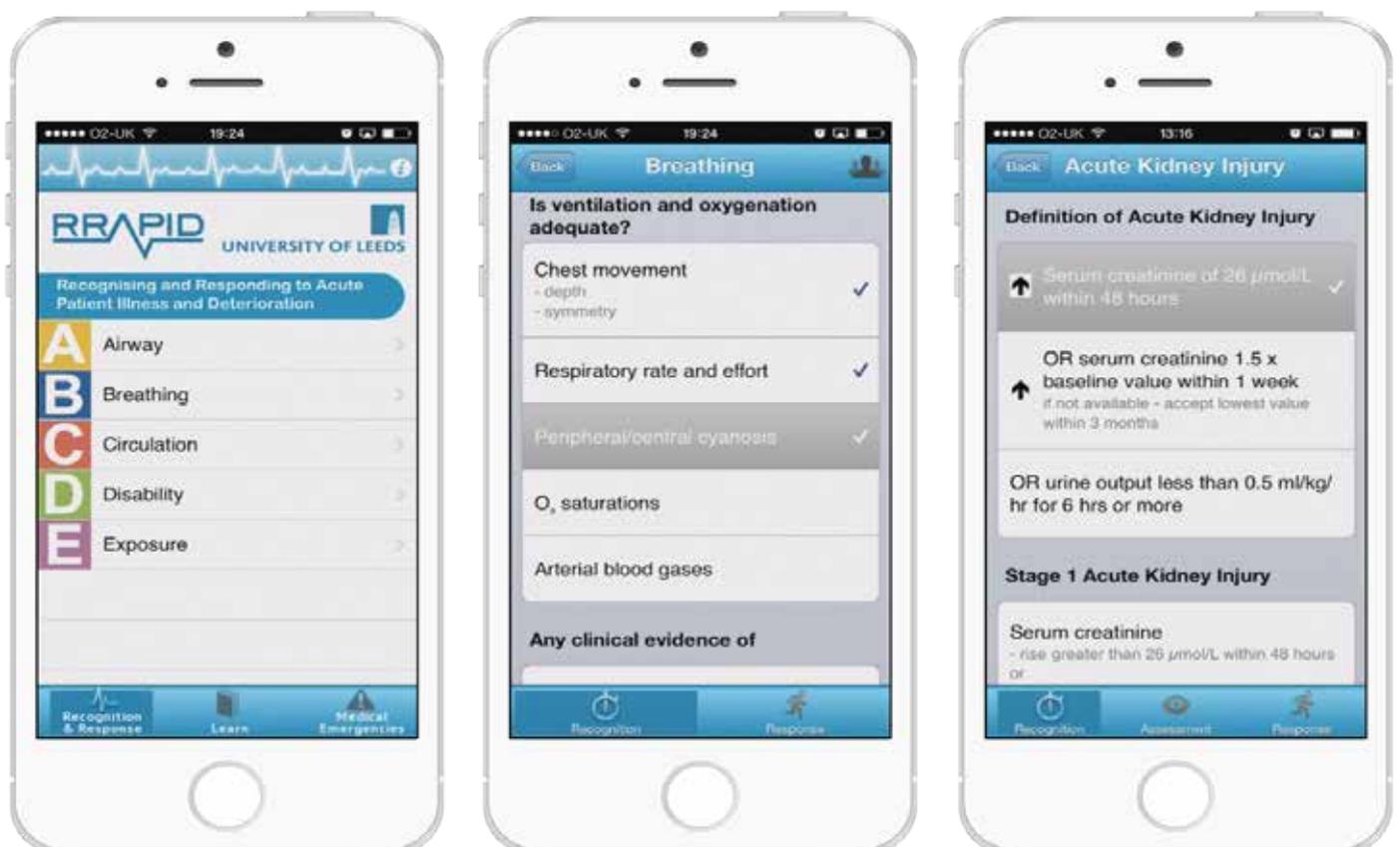
Student's use of the RRAPID eBook and iPhone app has been extensively evaluated. A questionnaire delivered to MBChB students (n=432) 6 months post launch of the

RRAPID resources indicated 92% of students who used the eBook found it to be quite or very relevant to their training. Medical emergency content, multiple choice questions and interactive patient scenarios were perceived as being the most useful elements of the book. A follow up evaluation 2 yrs post launch indicated that 94% of students surveyed would recommend the resource to their peers. The iPhone app has been equally well received by the Leeds student community. The 2 yr post launch evaluation showed that the majority of students surveyed used the app for revision (74%) and quick reference (70%) with 92% of respondents saying that they would recommend its use to their peers.

The impact of the resources extends outside the Leeds MBChB student cohort, shown by distribution of downloads from the Apple app store, which now total (internationally) over 6k downloads combined for both the app and the ebook.

The RRAPID suite of resources was shortlisted for the final of the years Times Higher Education Awards in the category of Outstanding ICT Initiative of the Year.

The iPhone app includes a section on medical emergencies where the user can quickly access information regarding recognising, assessing and responding to various conditions. The checklist allows the user to log their responses.



Welcome to Leeds MedEx.

The site to help orientate and guide students to clinical placements and learning opportunities



Welcome



Primary
care
placements



Secondary
care
placements



Medical
School



Contact us



A-Z



Leeds MedEx

✉ Dr Humera Tariq

Our undergraduate MBChB medical students currently attend placements at multiple NHS sites all across Yorkshire. The placement sites are very differing in their location and size and also differ in the aspects of the MBChB they aim to cover. The Leeds MedEx project is an innovative approach to supporting students and improving the placement experience which is undertaken jointly between LIME and NHS partners. We envisage users of this resource to include not only medical students, but also consultant clinical placement leads, clinical teaching staff and key staff within Leeds Institute of Medical Education.

The Leeds MedEx project will construct a password-protected mobile-enabled website that will promote consistency and continuity across all placement sites by:

- Defining all clinical placements available to Leeds Medical students
- Sharing feedback from all clinical placements and

encouraging the sharing of good practice and placement design

- Orientating students quickly to clinical placements and addressing logistical questions

Resource design

Upon completion, users will be presented with a well-designed, easy to navigate interface detailing each NHS trust and GP surgery. Logistical information for these primary and secondary care placement sites and details describing each clinical placement will be accessible.

The site information assists students with logistical issues such as travel directions, accommodation and transport policies. Students are introduced to the site's Undergraduate Education Teams and other key contacts. Additional menu options allow sites to showcase any individually unique aspects and highlight bespoke

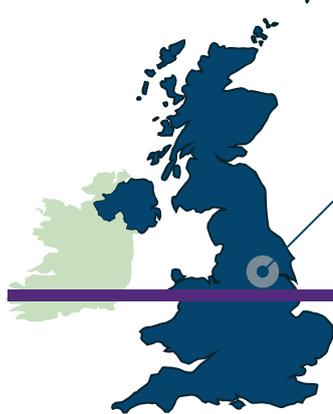
initiatives. All of the content is enhanced by the careful inclusion of multimedia elements such as photographic images and video.

Beyond this, the definition of every placement (Years 1-5) at each site allows students to learn what to expect from a placement, and what is required of them. Learning objectives are clearly defined and students are able to access example timetables and assessment details. Additional educational opportunities available at each site will be described. Links will be provided to virtual tours and useful external websites hosting educational resources, national clinical guidelines, teaching presentations,

bulletin boards, training videos and more. FAQ, student's comments and commendations, and top tips sections further act to equip students with essential information on each placement prior to starting.

We are in the process of asking all clinical placement leads and sites to contribute basic information about their placement and the locality where it is delivered.

The first phase Leeds MedEx launch will be September 2015.





iDecide

✉ Dr Sue Bickerdike

It is often assumed that medical students do not require careers information, advice or guidance. Our research however has illustrated that medical students feel they would benefit greatly from more career-learning interventions during the MBChB to compliment the targeted advice they receive in their final year to support their applications into employment and further training.

The iDecide project provides an interactive online resource which is designed to facilitate student learning about careers available in the medical arena. It also aims to broaden their views about the career options available to them after graduation as well as provide access to information to help them make realistic decisions about their future careers and plan accordingly.

It was first released in 2011 and was delivered as part of the Yr1 IDEALS section of the MBChB. Initially the resource consisted simply of the career action maze, but

the resource has subsequently been further developed into its current format and is delivered in both Yrs1 and 2 as part of the core MBChB curriculum. It is freely available to all year cohorts via our VLE and through the TIME website.

Resource design

iDecide consists of 6 sections:

- The decision action maze
- Intercalation
- Competition ratios
- A quick specialty link
- Networking
- The Mentoring Network

The Decision Action Maze

Students are able to work their way through a series of questions which relate to how they feel they would like

to work in their future careers, what skills they feel they possess and the types of environment that they would like to work in. At the end of the maze they are shown a range of specialties that reflect the choices they have made, and video interview (s) with a consultant (s) currently working in those fields. The consultant interview questions were designed to try to provide a succinct overview of life working within that speciality. The maze isn't a scientifically constructed psychometric testing tool, but merely a prompt to encourage students to think about their careers and a way to give students access to all the videos with the specialists.

Students can access the maze multiple times, but also jump straight to the collection of interviews to enable them to explore a range of careers at their leisure.

To date we have 49 specialty interviews included within the resource with more planned for the future.

Intercalation

Students studying on the MBChB have the opportunity to take time out from their medicine degree to study for a BSc or MSc in an area which particularly interests them. This intercalating year usually occurs between Yrs3 and 4.

There are many factors to take into account when thinking about intercalation. This section of iDecide aims to provide detailed information not only about the types of intercalating degrees available, but also information on other factors

(other than personal interest) that could influence the decision to intercalate such as the financial implications, how beneficial will it be to future employment and tips from current students who are intercalating.

Competition Ratios

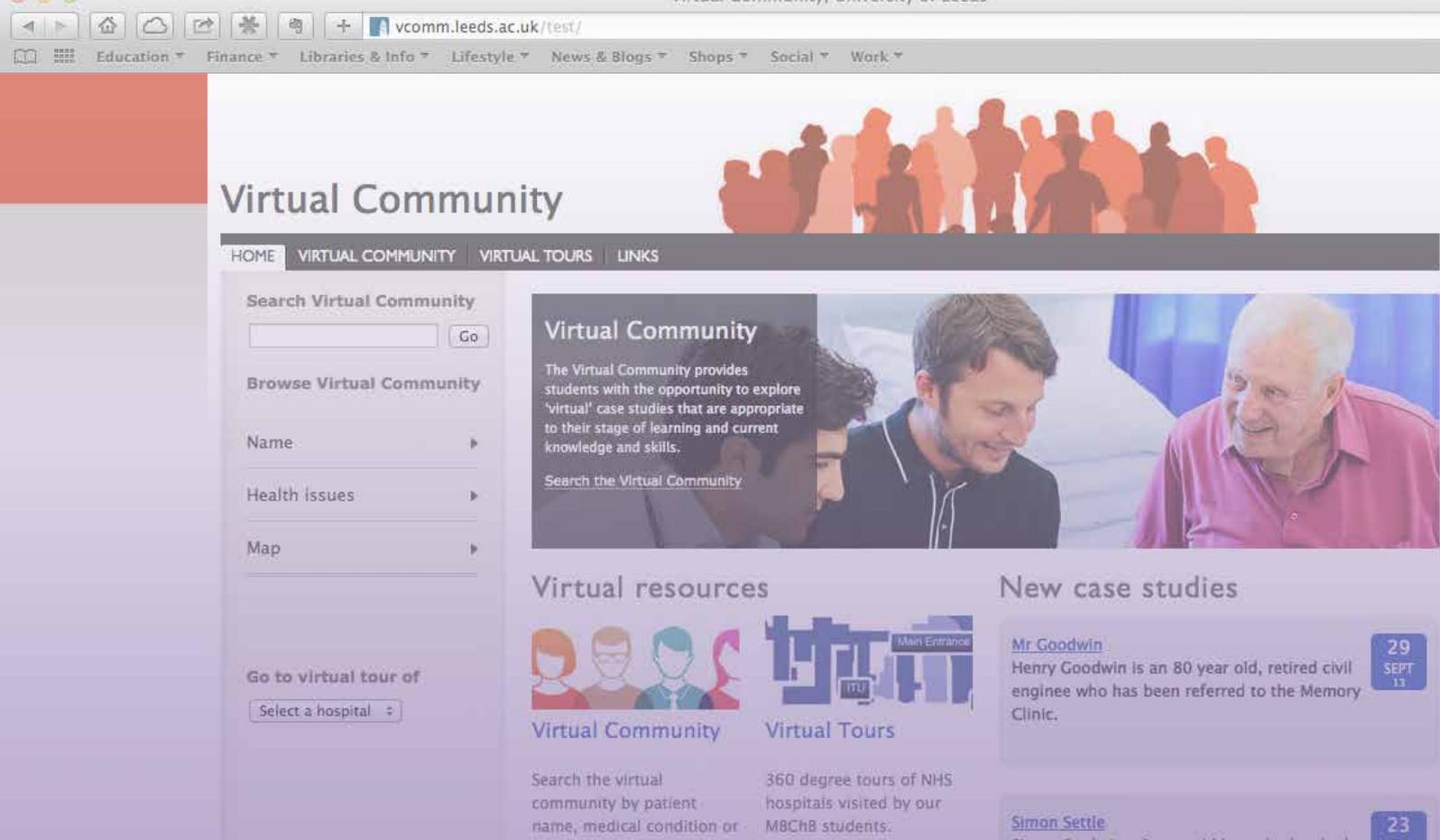
Competition for jobs in the specialties varies greatly depending on the speciality. Within this section we have condensed all of the information available about competition ratios to allow our students to make informed choices when thinking about which speciality they may wish to enter following the completion of their training.

Mentoring and The Mentoring Network

A recent development to iDecide has been the inclusion of the mentoring network. Within this section advice is given on networking skills in general, how to foster relationships with potential mentors and the benefits of mentoring.

We are currently building up a bank of mentors, clinicians working in our local area, who are willing to give time to students to talk to them about their career choices and provide valuable 'on the ground' experiences of working in a particular specialism.





Virtual Community

✉ Dr Sue Bickerdike

The Virtual Community has been developed as a resource in which our medical students are able to encounter virtual patients, review their case history, diagnose their condition based on real clinical data, and decide on a course of treatment independent of direct supervision.

It provides a means of conceptualising the basic science principles taught as classroom based ideas, and hopefully will give an indication of the decision processes that are involved in becoming an exceptional medical practitioner. The cases will be highly interactive, using video, audio and other interactive elements to illustrate the scenarios. At all stages within the cases the students are given feedback on their decisions and shown the correct course of action to be taken.

The Virtual Community, in its entirety, will contain a range of cases which will allow our students to not only diagnose and treat patients but also to explore ethical, socio-economic and communication scenarios at a level appropriate to their stage of learning. Cases developed will mirror and re-enforce the teaching our students receive and will provide an excellent opportunity for self-directed learning.

It was good to see the development of symptoms over time which you ordinarily wouldn't see in a 6 week placement. I also liked that the virtual patient case studies were broken down into bite sized pieces.

(4th year MBChB student)

To date the community comprises 111 cases of which 14 have been developed into fully interactive cases.

The virtual community is fully searchable by key parameters:

- Name
- Year Group
- Health Issue
- Geographical Location

Those cases that have been fully developed will show preferentially in the search results.

The Virtual Community is at the moment password protected, accessible via a University of Leeds username and password.

Three cases are open access, allowing visitors without the necessary permissions to the full site a taster of the community content.

The site can be accessed via the TiME website or directly here: <https://time.leeds.ac.uk/vcomm/>





Virtual Pathology

✉ Dr Sue Bickerdike

Pathology, like most of the medical specialties, comprises many sub-specialties and is in fact very diverse in nature. There are 4 main branches of pathology – Chemical pathology (the science of the chemical constituents of blood and other fluids); haematology (the study of disease of the components of blood); microbiology and immunology (the study of infection and its effect on the body) and histopathology (the study of disease of tissue), but these are further subdivided to give a total of 17 sub-specialties.

Our students will go out on patient visits from the very first term in their first year. Very early on in their student careers they will encounter patient sampling and testing, and therefore by default, engage with pathology. Crucially however, the opportunity to see how patient samples are processed and how different samples are processed

differently or indeed where and how these samples are analysed is quite limited.

The Virtual Pathology project aims to give our students a detailed insight into each of the 4 main specialties, over and above what can be described in dedicated teaching sessions. This is achieved through detailed descriptions of procedures, processes and techniques which are enhanced by high quality photographic images and video demonstrations of real-time processes.

Additionally, interviews with practicing pathologists talking about their careers gives an insight into the real life of a pathologist.

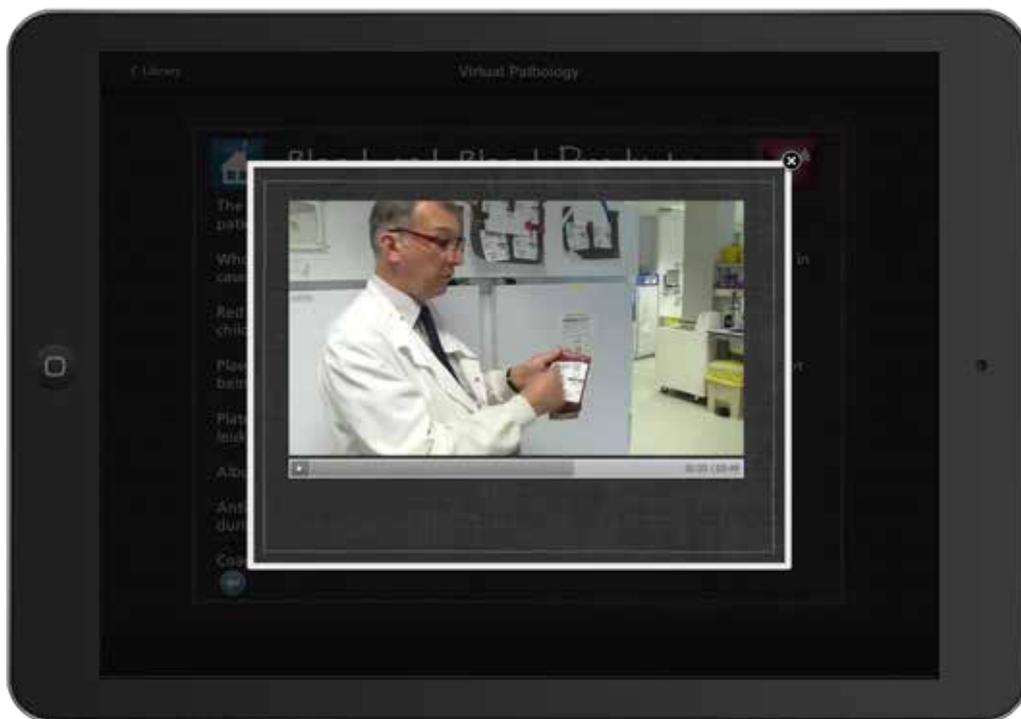
This project aims to demystify pathology by giving students virtual access to the 'behind the scenes story' of the main

branches of pathology and answer some commonly asked questions such as:

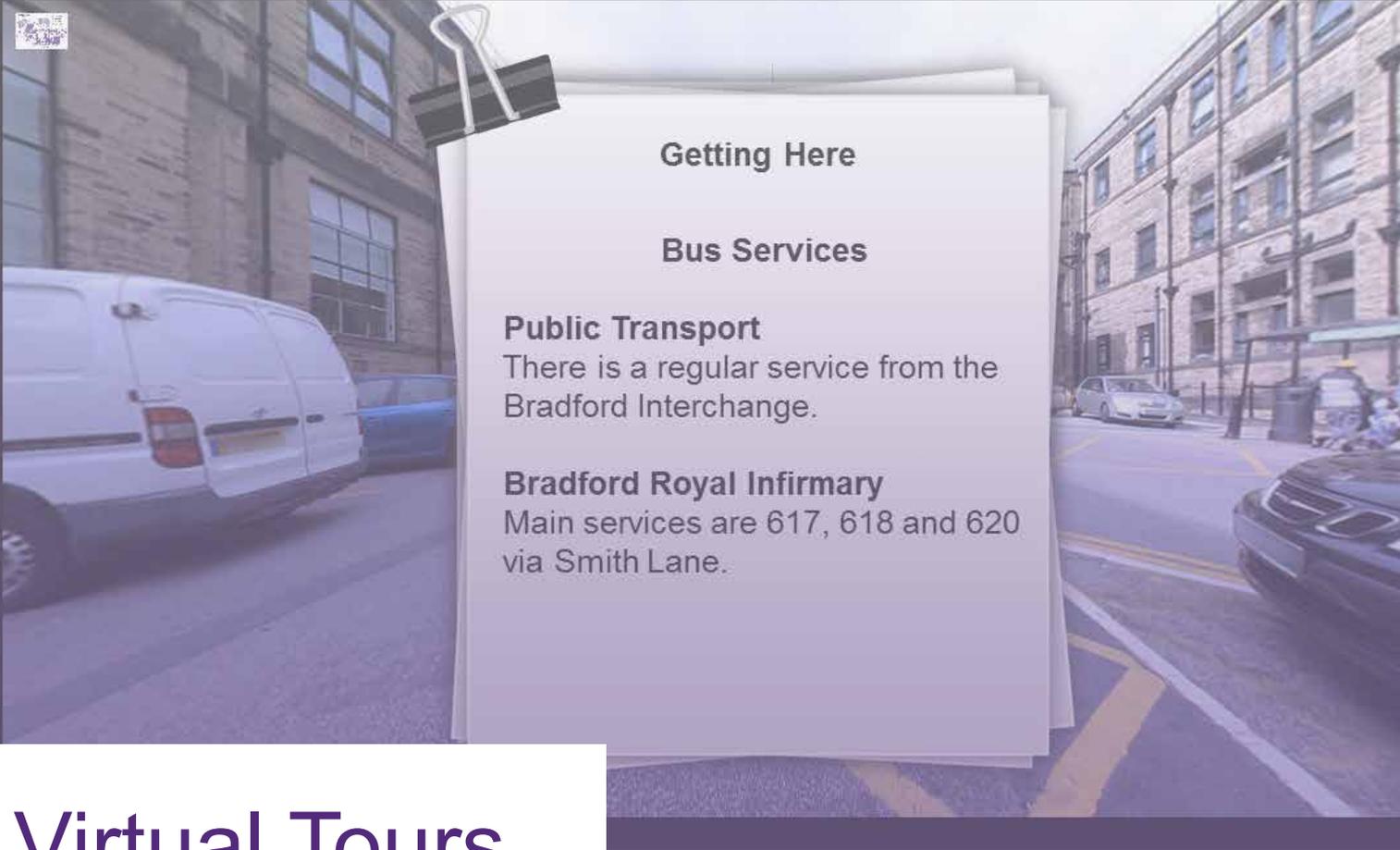
- Why do infection swabs sometimes take days to report back vs hrs for blood chemicals?
- Cross-matching blood – how does this happen
- How is a tissue sample investigated to ultimately produce a diagnosis?
- So in summary the aims of the virtual pathology project is to
- **Enhance** pathology teaching currently provided on the

MBChB by expanding on themes currently covered within the curriculum.

- **Encourage** students to familiarise themselves with pathology equipment, processes and environments by visiting the multimedia elements of the resource.
- **Expand** on the scientific principles behind the processes
- **Explore** pathology as a potential career
- Most importantly the VP project aims to simply **engage** students with pathology as a whole.



A Tour of Bradford Royal Infirmary



Virtual Tours

✉ Dr Sue Bickerdike

Our medical students start their clinical placements in year 1 of the MBChB course. The hospitals they visit are spread across West and North Yorkshire and range from very large teaching hospitals such as St James University Teaching Hospital to the smaller district hospitals such as Airedale and Harrogate.

Arriving at these hospitals can be very daunting; remembering what to bring, where to go, who to see etc. We have devised a series of 'virtual tours' which are designed to help orientate the students prior to their arrival on site.

The tours provide a 360° walk through of the hospital sites, showing where the wards, the restaurants, the teaching spaces etc are located and also give key information that the students need prior to arrival. Other information such

as how to get to the sites by public transport, parking facilities and accommodation options are also included.

Where possible we have also included short video interviews with key personnel – ward staff, clinical consultant leads and members of the placement team situated at each location.

Our Clinical Practice Centre has moved for the main University site to a dedicated building at St James University Teaching Hospital. A tour of the facilities available there have also been constructed as has a tour of the main medical library used by our Undergraduates.

School of Medicine

FLYING START HOME FOLLOW US CONTACT US GLOSSARY OF TERMS

You are here: School of Medicine

Welcome to Leeds



- Welcome ▶
- Settling in ▶
- Being an independent learner ▶
- Making the grade ▶
- Studying in a research-intensive university ▶
- Referencing ▶
- Making the most of contact time ▶
- How do you study? ▶

Video message



Welcome to the University of Leeds and to the Flying Start website. The aim of this site is to provide information to help you make the move from studying at school or college to studying at university.

As you will discover it is quite different, but with help from your lecturers and tutors you will quickly adapt and learn how to study effectively and independently in the university environment.

Take your time over the next few weeks to work through the sections in this site. You will find information that is relevant to all students in the top half with information specific to your school or department below.

Transcript

Welcome to the School of Medicine

Flying Start

✉ Dr Sue Bickerdike

Flying Start is an initiative led by Skills@library, University of Leeds which aims to 'raise student awareness of the importance of building a foundation of academic skills in order to enhance their studies and improve their grades and employability' (Carol Elston, Project Report: <http://flyingstart.leeds.ac.uk/report2012/>).

The Flying Start web site provides both generic material (produced by the Skills@library team) and course specific material (provided by each of the 34 participating schools/ departments across the University).

Once prospective students have achieved their required A level grades, been offered and accepted onto a degree programme at Leeds (in our case the MBChB) they are given access to the first section of the Flying Start site: <http://flyingstart.leeds.ac.uk/medicine/>

Over the course of the next few weeks further elements of the site are released to the students, thereby providing them with key information in small manageable chunks.

In the generic section of the web site students are directed to key information on such things as 'Settling In' – what is life like in Leeds, what the first few weeks will be like etc. Further along more 'learning specific' information is provided on topics such as research techniques, managing your time, contact time and much more.

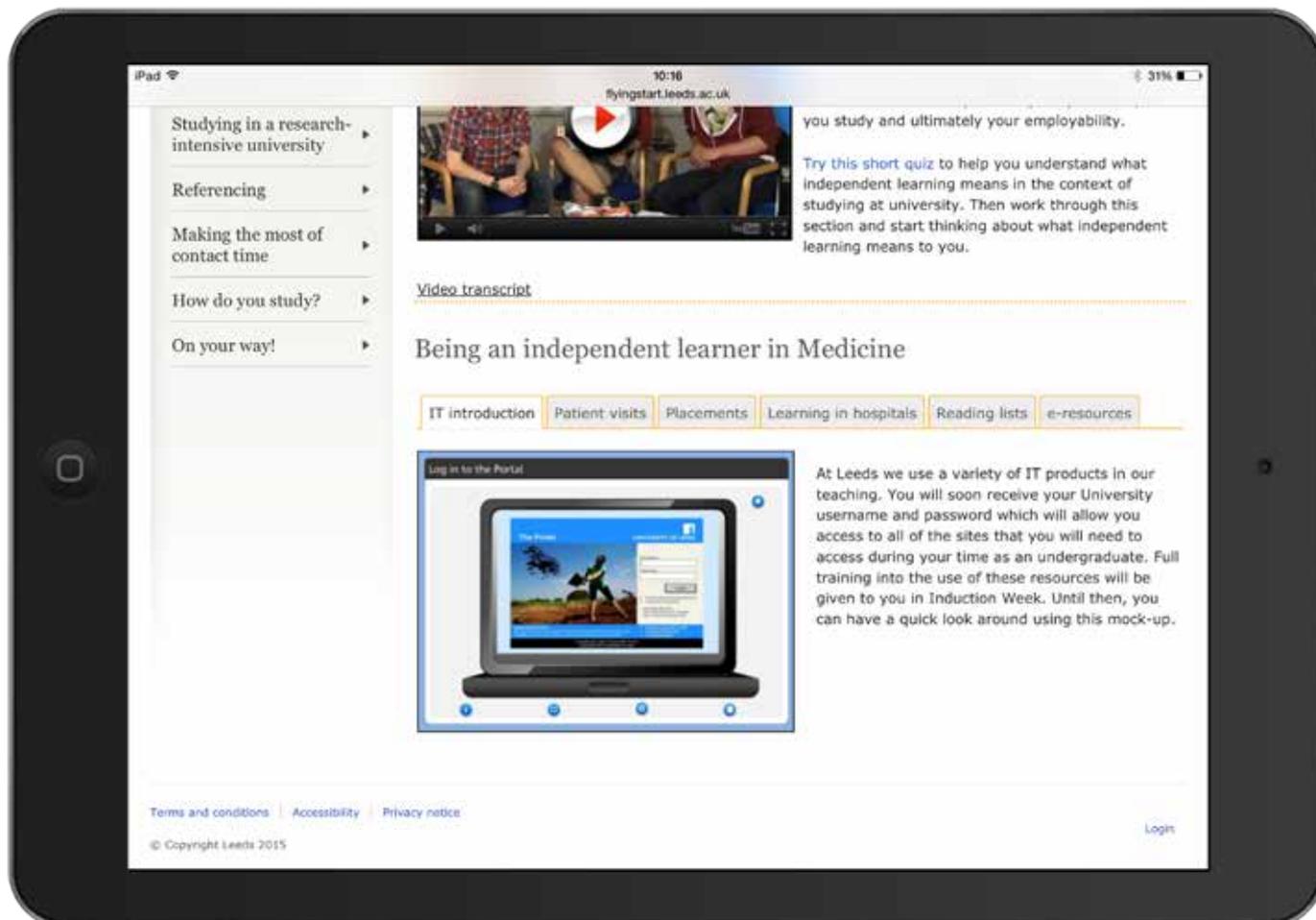
In the course specific section we were able to add information that we felt would be invaluable to our MBChB students to allow them to feel comfortable and confident during their first few weeks in their new surroundings.

This was achieved using a variety of techniques – video interviews with staff, current and past medical students who gave information about the course structure, peer mentoring schemes, assessment techniques, student

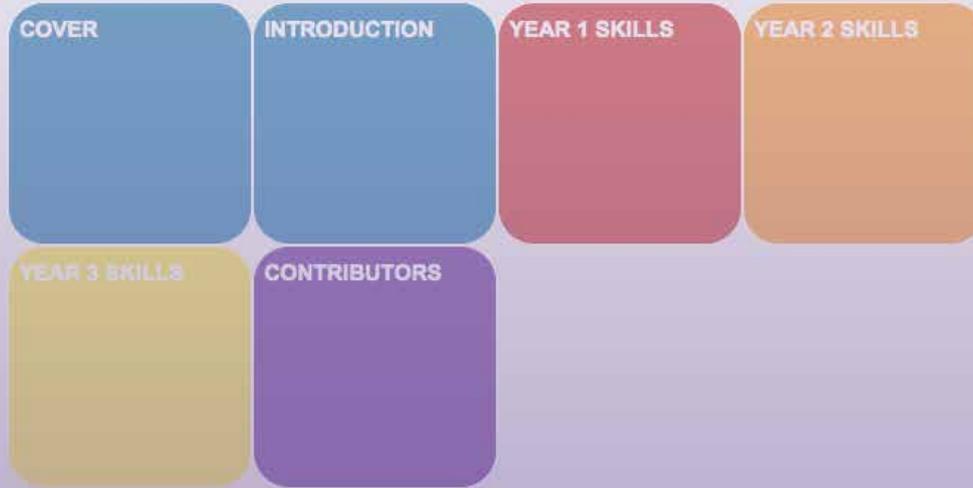
support and how to make the most of student life!

Interactive resources were included to introduce our new cohort to technology they would encounter once on the degree programme such as how to navigate the VLE (Virtual Learning Environment) and the Progress File. This type of interactive resource also allowed us to showcase key summaries of the Yr1 course, introduce students to key members of staff they would be interacting with during their first semester, and give them the all important Intro Week timetable of activities.

Some virtual tours were also included, firstly of the Health Science Library and secondly of the Clinical Practice Centre – a site that students need to visit but which is off campus.



Contents



Clinical Skills

✉ Dr Sue Bickerdike

Our MBChB students receive training in clinical skills both at the Clinical Practice Centre located at St James' Hospital, Leeds, but also when they are out on placement at our partner hospitals.

Throughout the 5 year course timetabled sessions are run which give the students the opportunity to learn and practice a range of clinical skills from taking a temperature or blood pressure to full obstetrics and gynaecological examinations.

We have developed a series of instructional videos which demonstrate each individual skill. This provides a permanent record of the correct procedure for carrying out this skill in line with MBChB guidelines. It also include information where techniques vary slightly across the different hospital trusts.

The videos form part of an e-book package which

includes photographs of equipment used, descriptions of the equipment and a written 'walk-through' of each of the procedures. It also provides the students with a comprehensive list of the skills they should be developing on a yearly basis.

The e-book is available online via the clinical skills website: <http://clinicalskills.leeds.ac.uk/> and <https://time.leeds.ac.uk/time/> Production of the resource as a multiplatform compatible, standalone off-line resource is currently underway.





The Leeds Graduate Story

Nina is an Foundation Year 2 (F2) doctor. She graduated from Leeds in 2011, having been loaned an iPhone in years 4 and 5 to support her placement learning and assessment. She believes that the experience she had in her undergraduate degree collecting evidence for her e-portfolio was invaluable for preparing her for the same process during her foundation training:

“I think from a foundation point of view for the future portfolio, well the portfolio I do at the moment, the more exposure you get earlier on as a student, it makes it easier for you to understand what an e-portfolio is, and makes your own portfolio better. Because when I started my foundation year for people who hadn't done any electronic evidence, it was obviously quite an adjustment to make... there are quite a few people in my foundation year who I think to all intents just struggled with the portfolio and so they had to repeat the year”

While Nina made extensive use of the learning resources provided by Leeds for the mobile devices, she also supplemented these with further applications as and when she felt she needed them. She continues to use these resources in her working life:

“The ones I think that I found useful were things like the ones for scoring, which were either free or actually I don't think cost that much to download, and as I thought it will be useful when I am working I don't mind making that

investment”

Like many of her peers, Nina recalls that having resources available on a mobile device meant that she could make the most of her time while on placement:

“So in terms of convenience I think it goes back to that you are carrying a lot of information around in a small device and it's quick to access, you don't have to spend a long time looking things up. If you're in a clinical setting and you're not seeing patients, say if your patient cancelled and you were just sat in the room for 20 minutes, then it was quite good, and if you're travelling to and from patients and you knew that you were going to see something that you weren't too familiar about then it was quite good to look things up before you went.”

Nina reflects on how using the resources has changed both the way she uses technology and accesses learning materials, and sees great possibilities for how this will support her in her career in the future:

“It's definitely changed the way that I use my mobile now and use technology now to learn, to have ongoing learning whilst working, and I think that the resources are endless which is what I quite like, and there are still things that are out there which I know would help me in my career that I haven't found yet or downloaded yet, so it's quite good to know that I have this sort of endless resource out there to use.”



Partnerships

The Technology Enhanced Learning (TEL) programme at Leeds is underpinned by a strong partnership model, with a focus on innovation and context throughout the curriculum. A key component of the TEL approach is knowledge transfer; sharing progress and developing ideas and projects with internal and external partners. The following pages present some case studies on our award winning TEL resources which have been developed as a result of some of our partnerships, to benefit the wider health community.

[Edit](#) [Attachments](#) viewed (0) times

created by GP George1 on 2014-01-27 15:59:01 augmented by (1) authors last update on 2014-01-27 15:59:01

Aims

- identify patients at clinical risk of dementia ;
- offer an assessment to detect for possible signs of dementia in those at risk ;
- offer a referral for diagnosis where dementia is suspected; and,
- support the health and wellbeing of carers for patients diagnosed with dementia .

Specification

- The GP practice undertakes to make an opportunistic offer of assessment for dementia to 'at-risk' patients and, where agreed with the patient, to provide that assessment.
- opportunistic offer means an offer made during a routine consultation with a patient identified as at-risk and where the attending practitioner considers it appropriate to make such an offer. Once an offer has been made there is no requirement to make a further offer during any future attendance.
- For the purposes of this enhanced service, 'at-risk' patients are :
 - patients aged >60 with (CVD), stroke, PVD or diabetes;
 - patients aged >40 and over with Down's syndrome;
 - other patients >aged 50 and over withLD;
 - patients with long-term neurological conditions which have a known neurodegenerative element,

Discussions [Create d](#)

Aims

At-risk patients

Also recommended

Experts [Show all](#) Other documents [SH](#)

Learning Layers – Smarter Learning for Primary Care

✉ Tamsin Treasure-Jones

Based on the Leeds Institute of Medical Educations (LIME's) experience and expertise in the areas of workplace learning research and Technology Enhanced Learning piloting & evaluation, we are now key partners in Learning Layers, a large EU research project focusing on supporting informal learning in the workplace.

The project understands the importance of workplace learning in healthcare, but also recognises that learning effectively from practice and then transferring that learning back into practice has many challenges especially given the time pressures on professionals. Learning Layers is innovative in that it is not only researching informal learning but also developing learning technology tools to support this learning on a large scale and across organisations. The research is taking place in two sectors: healthcare in the UK (focusing on GP practices) and building and construction in Germany.

LIME is leading the healthcare work in collaboration with the WSYB Commissioning Support Unit and local GP practices. Understanding the healthcare context and involving users in the design of the tools is essential to our work.

Connecting the developers and the healthcare professionals

Given that the project involves 17 partners spread across Europe, it is a challenge to ensure that the developers fully understand our healthcare context. Therefore, as well as hosting developer visits, we are also using empirical studies and co-design to help connect the developers and users.

Understanding the current practices

The first year's empirical studies involved working closely

with staff in local GP practices to understand how learning fits into their working practices. Based on this we have constructed Personas and User Stories (Thalman et al 2013) which were shared with our EU development partners to help inform their designs.

Co-design

GP practice staff and groups of other stakeholders have been actively involved in the early co-design of the technology tools (Cook et al 2014). LIME has led co-design workshops supporting healthcare professionals to explore and develop early design ideas using paper prototypes (Tomberg et al 2013).

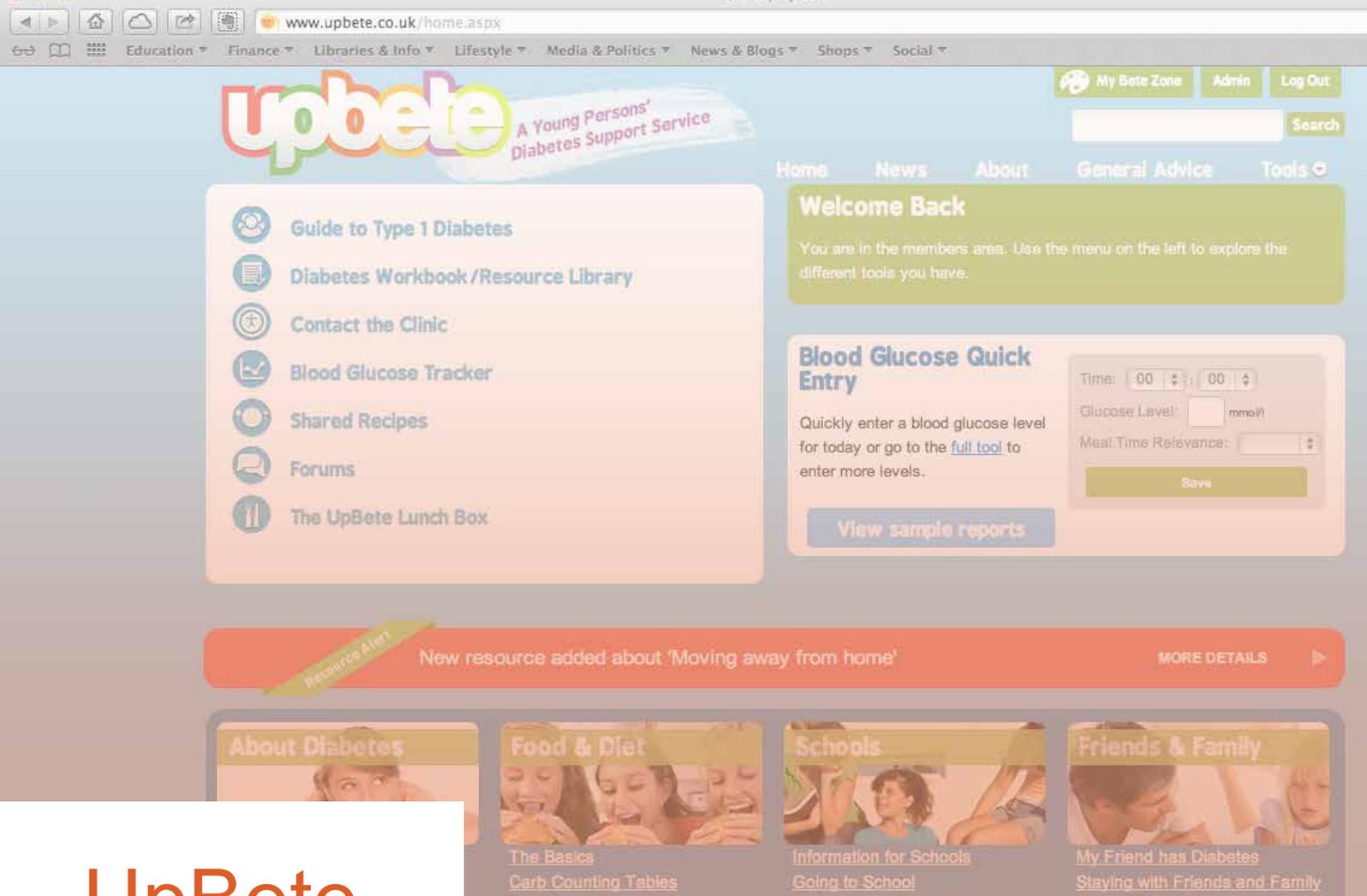
Based on this work, four prototypes are being further developed in year 2 and will be tested by GP practices. These tools support easy capturing of initial ideas and reflections (Kevin Reflect App), visual tools for organising, sharing and making sense of learning notes and information (Bits and Pieces), support for professional networks (Help Seeking tool), more effective sharing and collaborative development of documents - plans, services and training (LivingDocuments).

The project shows how LIME's TEL experience and expertise has been recognised at a European level and is providing us with a way to pull in additional EU learning technology and research expertise to develop and pilot innovative learning technology in healthcare.

LIME staff involved in this work are Dr John Sandars, Tamsin Treasure-Jones, Dr Micky Kerr and Anita Garvey. We would be very happy to work with others in Primary Care who have an interest in this area. Please contact us on learninglayers@leeds.ac.uk

This illustrates a "Help Seeking" tool (software, mobile app), which facilitates the construction of locally trusted personal learning networks. Healthcare professionals can seek collaborative peer support, by tagging people and learning resources, and through exchanging questions and answers around topics of interest.





UpBete

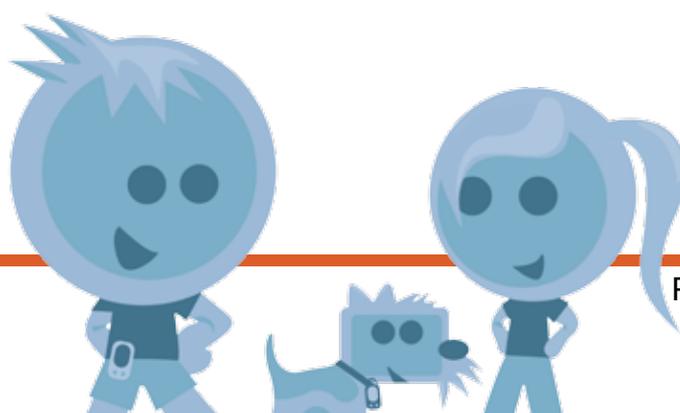
✉ Gareth Frith

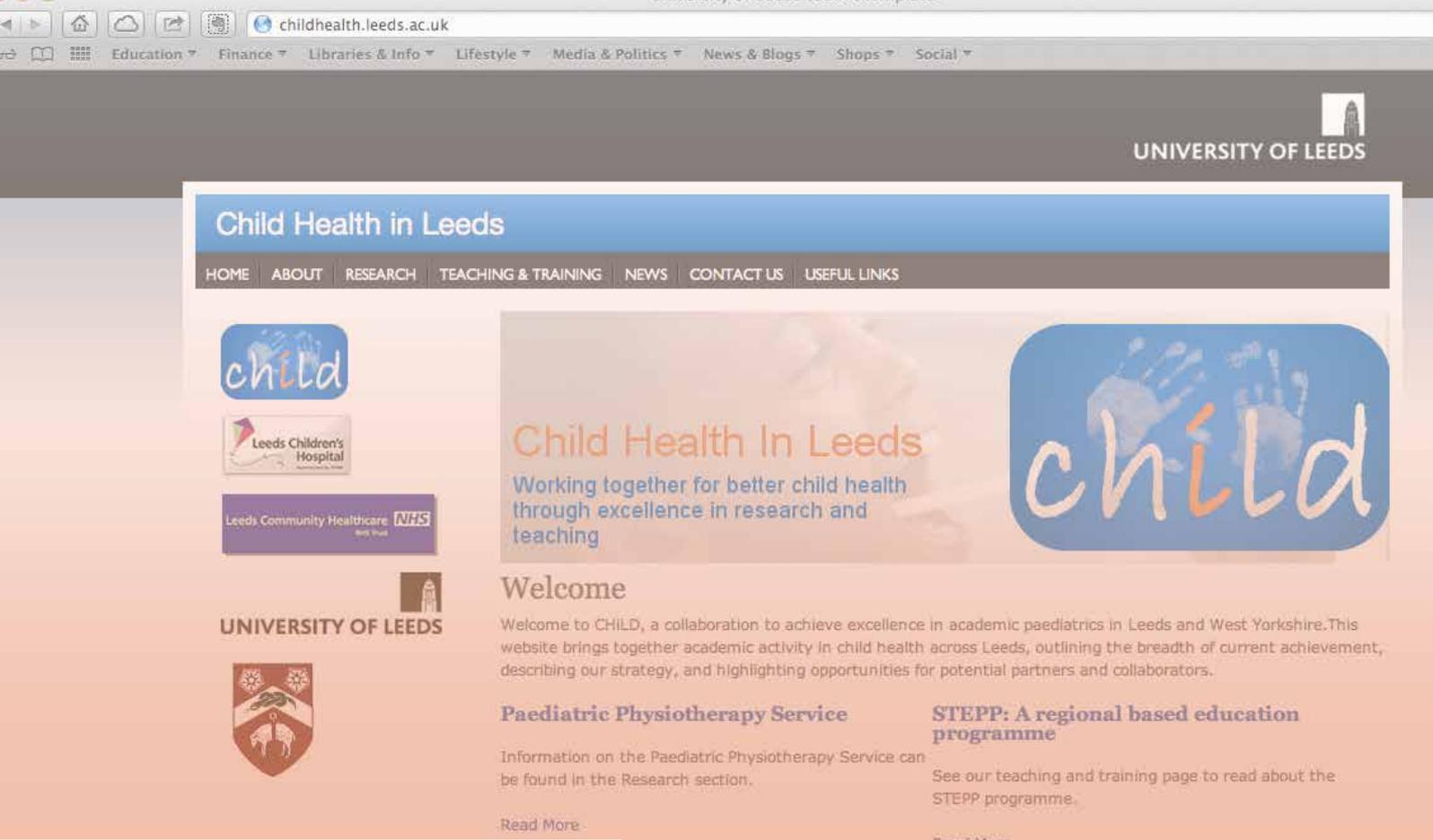
UpBete is an online support service for young people with Type 1 diabetes and their families.

UpBete provides information, advice and online tools to help young people and their families manage their diabetes. UpBete has contributed to a significant rise in the number of children in Leeds with good diabetes control. The UpBete website design was developed by a group of patients and their families.

The UpBete members area is packed full of interactive tools, information and advice for children and young people with diabetes, their families, their friends and the schools they attend. The UpBete Blood Glucose Tracker supports self-management of diabetes and engenders effective monitoring and management of blood glucose results from an early age.

UpBete was funded by the NHS Yorkshire and Humber SHA Regional Innovation Fund and is a consortium led by the Leeds Institute of Medical Education (LIME) and included the NHS in Leeds (NHS Leeds and Leeds Teaching Hospitals Trust) and MyKnowledgeMap Limited.





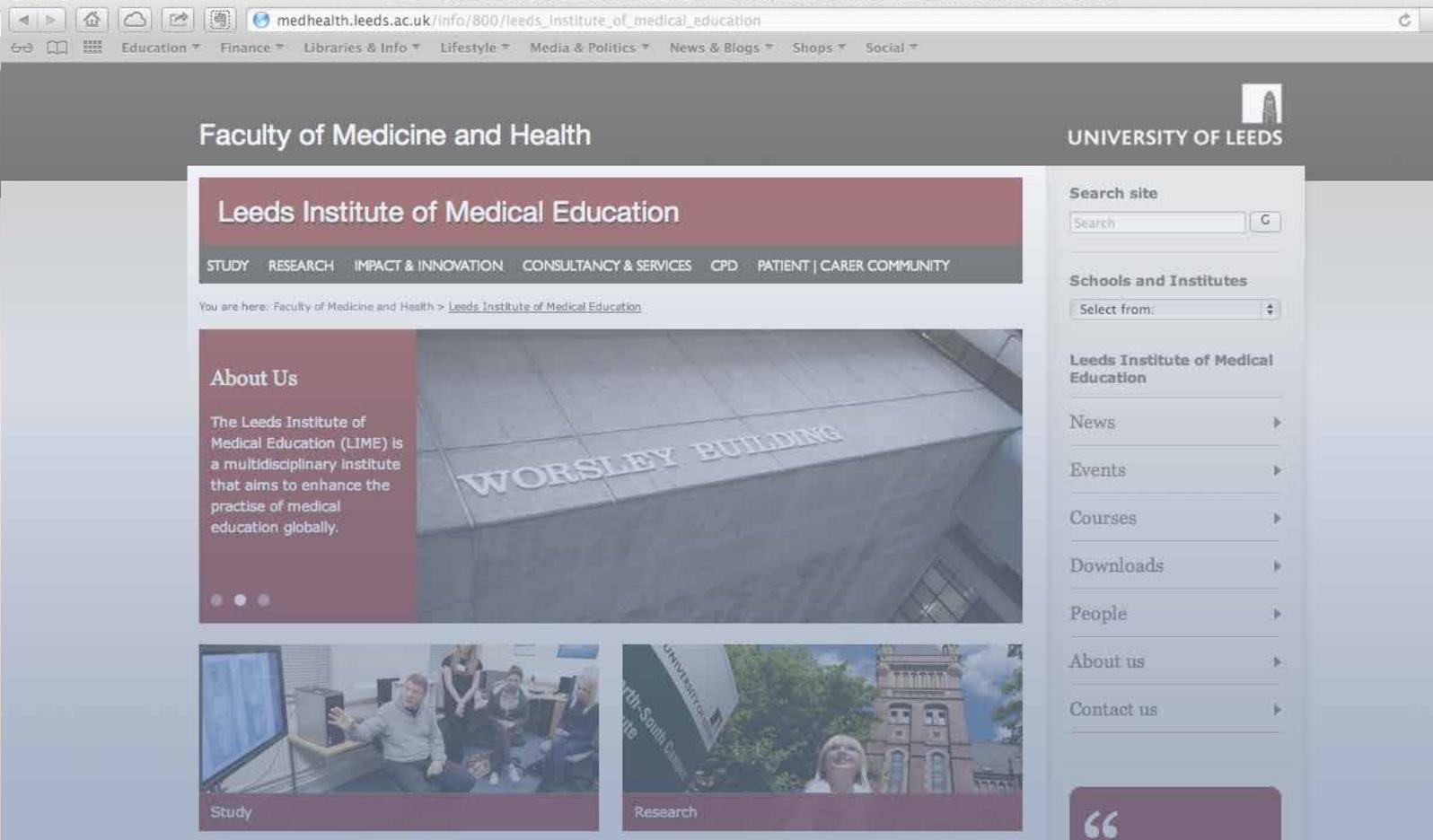
Child Health

✉ Dr Aurora Levesley

The Academic Unit of Paediatrics (AUP), based in Leeds Childrens' Hospital, approached the TEL Team to develop a website showcasing some of the research and teaching expertise around Child Health around the Leeds and the West Yorkshire region.

Scott Hennessy, a website developer based in the TEL Team, worked with Dr Jonathan Darling and Dr Tim Lee from the AUP to develop the page design, site structure and content for the site and develop a simple content management framework that allowed staff in the AUP to update the site with news items and research contacts.

Work on the site is ongoing and the pilot site from the AUP has been well received by the project steering group, who have provided further ideas for content development.



Technology Enhanced Learning: Research and Scholarship

The Technology Enhanced Learning Programme is underpinned by scholarship inspired content and design. This model has resulted in a symbiosis of scholarship output and curriculum improvement. A comprehensive research and evaluation programme has enabled us to evidence and embed the good practice around technology enhanced learning that we have developed over the last five years. This scholarship activity also helps us to plan future developments of our resources that will enhance the experiences of both students and staff in the MBChB. In turn these developments will be evaluated with all key MBChB stakeholders and the results of this inform any further stages of development.

Where next?

Our current research suggests that the MBChB Mobile programme is having a big impact on the way in which our students engage with learning and assessment

opportunities while out in placement, and on the way in which Leeds graduates practice. The results of this work will be developed into a series of academic papers over the coming months.

A number of new resources, including more interactive eBooks, a Clinical Skills application and a prescribing eBook (PILLS – Prescribing Information Learning Log for Students) are being developed and are planned for release in September 2014.

Key people

Viktoria Joynes, Mobile Learning Implementation, Evaluation and Development Officer

Dr Richard Fuller, Director of Undergraduate Medical Education

Tamsin Treasure-Jones, Senior Strategist - Technology Enhanced Learning

Selected Papers

Joynes, V. and Fuller, R. (2014) **“We are a generation who learns things just by doing”**: Exploring the impact of mobile-enhanced learning on medical undergraduates and qualified doctors. *British Sociological Association Annual Conference, Leeds.*

Bickerdike, S., Whittle, S. and Pickering, J. **Do lecture audio-recordings support engagement and flexible learning?** *Medical Education, Volume 48, Issue 5, p522-523, May 2014*

Fuller, R. and Joynes, V. (2014) **‘Should mobile learning be compulsory for preparing students for learning in the workplace?’** *British Journal of Educational Technology. Forthcoming.*

Fuller, R. (2013) **‘Undergraduate Healthcare Workplace Assessments and inferential validity perspectives. An opportunity to review test utility and educational impact?’** *American Educational Research Association Annual Conference, San Francisco.*

Thalman, S., Borntreger, V., Treasure-Jones, T., Sandars, J., Maier, R., Widmann, K., & Kerr, M. (2013). **Designing Scalable Informal Learning Solutions with Personas: A Pilot Study in the Healthcare Sector.** *8th European Conference on Technology Enhanced Learning, Paphos, Cyprus.*

Tomberg, V., Al Smadi, M., Treasure-Jones, T. & Ley, T. (2013). **A Sensemaking Interface for Supporting Doctor’s Learning at the Workplace – A Paper Prototype.** *ECTEL Meets ECSCW 2013: Workshop on Collaborative Technologies for Working and Learning, pp. 54-58*

Sanders, J.E., and Frith, G. (2013) **‘Mobile learning (m-learning)’** in Dent, J.A. and Harden, R.M. *A Practical Guide for Medical Teachers. Fourth Edition. London; Elsevier. Pp 231–238.*

Coulby, C., Hennessy, S., Davies, N. and Fuller, R. (2011) **‘The use of mobile technology for work based assessment, the student experience’** *British Journal of Educational Technology. 42(2): Pp 251-26.*

Now I can pull up all the resources when I’m still in the hospital. It’s just so much handier... you can make the most of your time when you’re on placement. And I think my learning is best when I can marry it with a clinical environment, when I can remember it in context with something I have seen

(A year 5 student reflects on how their opportunities to learn have changed as a result of MBChB Mobile)

Contact Us

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For enquires relating to our research programme contact:

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For enquires relating to our program of technology enhanced learning relating to consultancy and TEL advice contact:

E-mail: telteam@leeds.ac.uk

Meet the Team

Gareth Frith, Technology Enhanced Learning Manager - g.s.frith@leeds.ac.uk

Gareth is the Technology Enhanced Learning Manager for the School of Medicine at Leeds and is leading a team of learning technologists implementing technology enhanced learning for the teaching of undergraduate and taught postgraduate medical students in both the University and workplace settings. Gareth has presented at International and National conferences on Technology Enhanced Learning including Online Educa, m-learn, Handheld Learning and ALT-C. He also presents on Mobile Learning and Assessment for Apple.

Gareth is a Higher Education representative on the NHS Health Education England Technology Enhanced Learning programme. Gareth was also the Mobile Technologies Project Manager for the Assessment and Learning in Practice Settings (ALPS) Centre for Excellence in Teaching and Learning until April 2008 and has had a career in IT and telecommunications prior to that.

Nancy Davies, Learning Technologist - n.e.davies@leeds.ac.uk

Nancy works for the School of Medicine as a learning technologist supporting staff and students in their use of technology for learning. She provides training on the use of ePortfolios and iPhones for work-based learning and professional development.

Nancy has over ten years experience in the development and support of innovative technology within higher education with research interests in technology enhanced learning and teaching.

Viktoria Joynes, Mobile Learning, Implementation, Evaluation and Development Officer - v.c.t.joynes@leeds.ac.uk

Viktoria joined the university in 2007 as the research officer for the Assessment and Learning in Practice Settings (ALPS) Centre for Excellence in Teaching and Learning, a programme of work that involved 16 health and social care professions and 5 higher education institutions which looked to introduce interprofessional assessment and develop mobile resources to support students in placement.

Viktoria now leads the research and evaluation programme into the development and use of mobile resources to support learning and assessment in the school of medicine, and has research interests in interprofessional education and the development of professional identity.

Dr Suzanne Bickerdike, Learning Technologist - s.r.bickerdike@leeds.ac.uk

Dr Suzanne Bickerdike joined the University of Leeds in 2005, taking up a Post-Doctoral research position in the Faculty of Biological Sciences. Following a period of laboratory-based research she moved into e-learning developing a series of on-line laboratory practicals to

support Undergraduate teaching in FBS (<http://www.virtual-labs.leeds.ac.uk/>).

Suzanne joined the Technology Enhanced Learning Team in LIME in 2010 as a dedicated learning technologist. Since joining she has developed many of the interactive teaching materials used to support the teaching of the MBChB curriculum and is now responsible for project development and management in addition to content delivery.

Scott Hennessy, Database Developer - s.hennessy@leeds.ac.uk

Scott Hennessy is a learning technologist and website developer based at the Leeds Institute of Medical Education. He has presented on the use of mobile content development at Educa Berlin 2009 and on mobile deployment at Educa 2010.

Dr Aurora Levesley, Technology Enhanced Learning Officer - a.levesley@leeds.ac.uk

Aurora Levesley joined the Technology Enhanced Learning team in 2013 and is responsible for developing and supporting innovative interactive teaching materials for use in the teaching of undergraduate medicine. Aurora has experience of post-doctoral research within the Faculty of Biological Sciences and has over 10 years experience of delivering national educational projects with an emphasis on technology enhanced learning and has publications in the area of education.

Tamsin Treasure-Jones, Senior Strategist – Technology Enhanced Learning - t.treasure-jones@leeds.ac.uk

I have 18 years experience of research and project management in Higher Education, managing large-scale, collaborative programmes with a focus on practice-based learning, technology enhanced learning, online learning for small to medium-sized enterprises and knowledge transfer. In 2008 I moved to the School of Medicine to take up the role of Mobile Technologies Project Manager and ultimately the Programme Manager of the ALPS programme which developed mobile technologies to support undergraduate medical education and evaluated the use of these technologies by students in 5 universities. This work led into my current role as Senior Strategist and Project Manager of the Learning Layers project for LIME.

Richard Gatrell, Information Systems Manager - r.p.gatrell@leeds.ac.uk

Richard joined LIME as Information Systems Manager in January 2014, having previously worked at Lancaster University as a Database Systems Administrator. Richard's responsibilities in LIME are to manage the large amount of information used within the Institute and to develop new systems to support the MBChB programme.

Richard Fuller, Associate Professor & Director, MBChB Programme - r.fuller@leeds.ac.uk

Richard graduated from Leeds School of Medicine in 1995. Then returned to read a higher degree in Leeds whilst undertaking higher specialist training in Geriatric Medicine in Yorkshire. His current role is split between clinical work as a Consultant Geriatrician and as Director of Undergraduate Education at Leeds Institute of Medical Education. He is responsible for directing the MBChB degree programme which has recently undergone a significant and successful curriculum review.

Lee Gill, Web | VLE Officer / TEL Team Administrator - l.d.gill@leeds.ac.uk

Lee first joined LIME in February 2014, having previously worked at the Leeds Language Centre in the faculty of Arts where he worked as an Admissions Assistant. Lee's responsibilities in LIME are to manage and support staff in their use of the VLE. Lee also works as the TEL team's administrator.

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