



Case study 7: Assessment and learning in practice settings (ALPS)

Centre for Excellence in Teaching and Learning, Universities of Leeds, Bradford and Huddersfield, and Leeds Metropolitan and York St John Universities

What this case study covers

- **Subject and level:** Higher education undergraduate students studying for one of 16 healthcare professions
- **Topic:** Improving the learning and assessment experience for students on work placement, by providing access to resources, support and assessment tools via mobile devices
- **Technologies used:** Secure mobile services platform, Virtual Learning Environments (VLEs), data encryption service, smartphone devices (including the iPhone[®]), student-owned devices, web-based e-portfolio systems, Wi-Fi network, mobile-optimised assessment tools, electronic resources, MyKnowledgeMap[®]

Background

In 2005, the Higher Education Funding Council for England (HEFCE) funded 74 Centres for Excellence in Teaching and Learning (CETLs) in response to the 2003 government white paper *The future of higher education*. The aims of the CETL initiative were to “reward excellent teaching practice and and to further invest in that practice so that CETL funding delivers substantial benefits to students, teachers and institutions” (HEFCE, 2009). The 74 CETLs were located across England, representing all the main subject areas and many aspects of student learning. Each CETL was funded over a period of five years.

The Universities of Leeds, Bradford and Huddersfield, and Leeds Metropolitan and York St John Universities came together to form a CETL for Assessment and Learning in Practice Settings (ALPS). Collectively, they sought to draw on the common strengths of the various universities, develop practice in line with an emerging emphasis on inter-professional practice in health and social care professions, and to take advantage of mobile technology to engage students more closely in the assessment process.

Vision

The CETL's ALPS programme has a mission to ensure that students graduating from courses in health and social care are fully equipped to perform confidently and competently at the start of their professional careers. In order to support this, ALPS investigated the use of mobile technology to improve the assessment and learning experience of students while on placement. Students from 16 health and social care professions were involved in the ALPS programme.

Hands-on experience can greatly enhance students' learning but can have drawbacks. Varying levels of access to tutorial support and computers may cause students to feel isolated or miss learning opportunities. Mobile devices provide students with reliable, consistent and secure access to a range of services, tools and resources to develop the competencies and confidence essential to their professional practice.

Initially, ALPS loaned Microsoft® Windows®-based mobile devices to students, but since the summer of 2010, the University of Leeds has issued iPhones to medical students in years 4 and 5, while the University of Bradford is developing access to a wide range of resources and services via student-owned devices.

Transforming practice

The ALPS programme is multi-faceted involving a radical review of assessment practices across 16 healthcare professions, compliance with the requirements of stakeholder groups such as the National Health Service and professional, statutory and regulatory bodies, attention to ethical and legal aspects of professional practice, building trust and collaboration across five higher education institutions, and the procurement of a large-scale mobile service platform integrated with other institutional systems. Collaboration on this scale was unprecedented but an essential challenge if the full vision behind the ALPS programme was to be realised.

Inter-professional assessment

In recent years, inter-professional working in healthcare professions, where professionals work together in multi-disciplinary teams, has been recognised as improving the quality of patient care. The aim in establishing inter-professional assessment across the 16 healthcare professions serviced by the ALPS institutions was to make it possible for students from one profession to be assessed by staff or

peers from another health or social care profession. In turn, it was expected that this would facilitate the ability to assess students' practice in a broader range of situations and would build students' confidence and competence, develop important inter-professional working skills and simplify evidence collection for students. Such a significant change required compliance with the requirements of stakeholder groups such as the National Health Service and the ethics committees of the 16 professional, statutory and regulatory bodies involved, as well as attention to legal considerations.

Three core competencies common to all 16 professions were identified – communication skills, team working and ethical practice – and [competency maps](#) developed for each. Each map identifies the competencies a student is expected to achieve on graduation.

The common competency maps were used as a framework from which a series of five [student-led assessment tools](#) that support reflective practice were developed. The tools enable students to collect feedback from assessors, from peers and, where appropriate, from service users and carers. In addition, there is also a section for the student's own reflection and action planning. The tools cover the topics of: gaining consent; demonstrating respect for a service user during an interaction; providing information to colleagues; working inter-professionally; and knowing when to consult or refer.

Measuring competence and competence

The ALPS programme needed a measure of competence and confidence of students at or near the time of registration that reflected the needs of all 16 ALPS professions and tested the employment competencies of communication, team working, professionalism and technical skills and knowledge. An extensive literature search revealed there was no assessment tool available which suited the needs of ALPS. The Baseline Outcomes and Research group therefore designed, developed, piloted and validated the [Competence in Practice Assessment \(CiPA\)](#) tool. This tool is uniquely inter-professional and measures undergraduates' confidence and perceived competence in professional skills rather than their clinical skills. Students were asked to complete the CiPA tool at registration and at six months and 12 months after graduation.

Results indicated a very wide variation in confidence and perceived competence across the different professional cohorts. However, there were some areas where students generally appeared less confident across all professions. These areas were: dealing with conflict and negotiate differences; motivating others; and dealing

with cultural issues. Additionally, it seems there is a dip in confidence six months after graduation which then recovers after 12 months.

The CiPA tool is now being developed so that individual students can use it in their personal development planning throughout their undergraduate education and beyond.

Mobile learning platform

Designing and building a large-scale mobile solution was not only a major procurement exercise but also an exercise in working across institutional cultures and systems, including commercial partners, to reach a best fit. Accommodating multiple platforms (VLEs, student record systems and e-portfolios) across multiple partners was acknowledged as a complex task. Involving commercial partners (MyKnowledgeMap and ecommnet) who held positions on relevant ALPS committees as part of the programme team and who worked alongside academic, placement and learning technology staff contributed to the design and development process for the mobile learning platform and software solutions. As a result, ALPS was able to develop a mobile learning platform and assessment suite that is shared across the partners and that links in to the individual universities' systems, providing authenticated access when users log on.

To address security concerns, a data encryption process ensured confidentiality and minimised the risk of students losing valuable data. The security of personal data is enhanced by not storing data directly on the mobile device.

Additional research

ALPS also funded three additional [research capacity projects](#):

- The **Mobile Enabled Disabled Student (MEDS)** project explored the use of technology by disabled students. Students found that devices helped them with organisation and spelling, and provided the ability to record audio notes. Recommendations from the MEDS project for changes that would make a positive impact on disabled students were made to the software developers.
- The **What Matters to US** (users of services) project investigated how professionals can support patients and their carers to play a greater part in care and decision making. As part of the project, the Patient Learner Journey programme was developed which enables users and others to learn from their experiences.
- The **Service User Involvement in Mental Health Training** project studied service user and carer involvement in mental health training, education and

research, with the aim of identifying the most effective processes and strategies for meaningful service-user involvement.

Benefits

While mobile technology became the solution, the underlying vision continued to be to improve confidence and competence in practice. As a result of the ALPS programme, students are benefitting from more responsive tutorial support, reflective tools, access to key medical texts and other resources to support their practice, and the ability to capture and submit evidence with ease wherever they work or study.

The ease of uploading evidence to the e-portfolio means that students can easily assemble everything in one place and can reflect on work before submitting it for assessment. Tutors are notified when work is ready for assessment and can feed back in a timely manner. Tutors are also able to monitor progress and prioritise workplace visits for those most in need of support.

The authenticity of the assessment twinned with the ability to capture immediate feedback from multiple sources is proving beneficial to students, service users and tutors.

The extensive collaboration with partner universities, health authorities and professional regulatory bodies has had a positive impact on the development of inter-professional working beyond the ALPS project.

Useful to know

- Complex programmes require commitment and vision at the highest level, supported by detailed research and consideration of the resources and structures most likely to service the project aims.
- Collaborative projects, including those with commercial partners, offer great potential in terms of pooled resources and expertise, creative growth, increased bargaining power, marketable products, new business opportunities, and momentum for change, but need time for relationships and trust to develop.
- The rapid pace of technological change makes future-proofing difficult. Enabling access via user-owned rather than university-owned devices may present a more sustainable option but will require student access to appropriate technology and a mobile platform flexible enough to deliver a wide range of devices.

Moving forward

Although challenging at times, the partnership between the individual universities and stakeholder groups involved has enabled the centre to achieve significant return on investment and transform assessment practice, providing authentic experiences that more closely reflect what future healthcare professionals will face in practice.

The ALPS mobile learning work has had an influence across the partnership. The University of Leeds School of Medicine is taking the work forward through its Mobile Learning project and developing a mobile strategy for the whole university, and has also started to develop mobile apps (applications) which will be available for users to download from the Apple® App store. At the University of Bradford, a broader focus on providing mobile access to university systems is now part of its e-strategy.

The five universities continue to work together beyond the funded lifecycle of the CETL through a series of [collaborative networks](#) to support further research and development in: competency mapping; mobile learning and assessment; patient and carer voice; accessibility; e-portfolios; and use of the CiPA tool in personal development planning.

Learner perspective

Students are clear about the benefits of the ALPS programme and the impact on their professional development:

“We’ve now been given the Oxford Clinical Handbook, which is one of the tools that nearly all medical students use, as an app on our iPhones. And on those iPhones we get to find out how to take a history, how to take an examination. We can search different conditions.”

Prabhjoyt Kler, Year 4 Medical Student, University of Leeds

“I have actually bought my own device to use full time. I found the ALPS device so useful, and once you integrate technology into your life it becomes normal, therefore it made sense for me to invest in my own device.”

Midwifery Student, University of Bradford

Institutional perspective

“The point is about being able to assess students close to the patient, close to the bedside, so that the student can be observed by a healthcare professional or a clinician or the lead nurse working with the patient. As soon as they finish that they can do an immediate assessment with the medical professional.”

Gareth Frith, Technology Enhanced Learning Manager, University of Leeds

“The assessment tools have had a huge impact on being able to support students at a distance and on providing tutors the opportunity to monitor progress.”

Dr Jill Taylor, Co-Director of Technology Enhanced Learning Team, Leeds Metropolitan University

“What the ALPS CETL has allowed us to do is to experiment with mobile learning, and you know you can't believe that five years ago people were still looking at computer clusters, so you'd learn at a desk. Now that's been blown away by the fact that any time, any place, at any pace you can get access to learning and to information.”

Professor Trudie Roberts, Director of ALPS CETL, University of Leeds

Reflect and discuss

The core pedagogical intent behind this project was to improve assessment; the technology was just the tool to service that intent.

- Thinking about an aspect of your own assessment practice, what opportunities are there for you to explore the benefits of newer and emerging technologies?
- Are there others (within or external to your institution) with a shared interest? If so, what additional benefits might collaboration bring?

Key words

Assessment, collaboration, competency, disabled students, mobile phones, mobile services, practice settings, professional practice, reflective practice, return on investment, smartphone

Links and further reading

ALPS CETL website, providing access to the full programme resources including assessment tools, project reports, casebook and competency maps, and a link to the ongoing work of the ALPS networks www.alps-cetl.ac.uk

ecommnet www.ecommnet.co.uk

HEFCE CETL web page www.hefce.ac.uk/learning/tinits/cetl

MyKnowledgeMap www.myknowledgemap.com

See also the video clip: Assessment and Learning in Practice Settings
www.jisc.ac.uk/emergeresource