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A Peer Reviewed International Journal for the Advancement of Clinical Skills
- 'docendo ac discendo' - 'by teaching and learning'

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Acknowledgements

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Foreword

We want raw ePortfolio data, and we want the data now

Patients trust that healthcare professionals will possess the clinical skills to provide safe and effective treatment. Serious failures of medical care, through the actions of individuals and the inaction of organisations, have shaken that trust and led to a re-examination of the process of registration. In many countries and disciplines, continued registration now depends on the documentation of continuing professional development. Some jurisdictions, such as the UK, have gone further and are planning more comprehensive evaluation of clinical performance for revalidation. In all cases, assessment is based on some form of ePortfolio.

"An e-portfolio is a purposeful aggregation of digital items – ideas, evidence, reflections, feedback etc, which 'presents' a selected audience with evidence of a person's learning and/or ability." Sutherland and Powell (2007)

Presenters in the healthcare ePortfolio track at the 8th International ePortfolio Conference, London (July 2010) described a wide range of ePortfolios being used or being developed for allied health, dental surgeons, surgeons, physicians, nurses, medical education, foundation medical graduates. ePortfolios are used by students to evidence acquisition of clinical skills for initial registration, by new graduates to collect evidence of competence for credentialing and by trained staff for evidence of consistent expert performance. As Stuart Cable from the Royal College of Nursing (UK) explained:

"[the ePortfolio] enables nurses to demonstrate their competence in different areas of nursing practice. They are able to capture 'just-in-time' reflections on their practice or a learning experience and then re-present this evidence for different purposes, for example, personal development planning, competence demonstration and educational accreditation of prior learning." (Stuart Cable, Proceedings of the ePortfolio Conference, Maastricht, 2007)

The need for repurposing the same set of collected data across time was confirmed by many of the International ePortfolio Conference presenters: as their careers develop, healthcare professionals will be required to transition across several ePortfolio systems, from those used during initial training, continuing professional development, quality assurance procedures and, at regular intervals, to support reaccreditation processes.

To support evidence of informed and reflective practice, healthcare professionals collect evidence from a variety of sources and data systems, such as patient personal health records, laboratory test analysis, clinical diaries, feedback from peers and patients. Unfortunately, all these different pieces of information are usually stored in independent information silos, making the work of ePortfolio construction and assessment more difficult, notwithstanding that silos make data errors more likely to occur and less likely to be corrected. As most individual ePortfolios also create their own data silos, it reduces the ability to share relevant and critical information across a profession to advance professional practice.

While the initial idea of repurposing ePortfolio data rests on the editing work of an individual compiling a new document, there is an alternative and more radical way of exploiting ePortfolio data: data freedom, i.e. allowing a wide range of online services to exploit raw ePortfolio data.

Imagine a world in which all data created by a healthcare professional when interacting with patients, teachers, colleagues and organisations is securely stored in a Personal Data Store (PDS), creating a 'life log'. Imagine that patients in the healthcare ecosystem have their own personal data stores and can share the contents, under their control, with the people and services they trust. Imagine a world where everyone would be able to choose any health ePortfolio services while being fully interoperable with those used by various institutions with which healthcare professionals interact.

Imagine a world where the performance of students at several medical schools could be confidentially mined to identify best practice for teaching clinical skills. Imagine a service collecting data from the personal data stores of all the staff of a hospital to conduct audit procedures. Imagine another service identifying the need for training and linking it to workshops on particular topics at a conference or a review in a journal. Imagine a service mining anonymous healthcare data collected in personal data stores by a patient's support group. What Amazon® and Google® can do with their global data stores to identify patterns and trends and target advertising, we can do, with personal data stores for the benefit of healthcare, professional education, patient safety and society in general.

Such a world is possible. It was presented by EIfEL at the launch of the Internet of Subjects (www.iosf.org) during the 8th International ePortfolio Conference. The Internet of Subjects supports the programme that Sir Tim Berners-Lee, the inventor of the Internet, called for: *"we want the data raw, and we want the data now!"* To achieve that goal, which is to facilitate reuse, repurposing and exchange of data, we need to achieve the separation of data from the applications and services producing and exploiting it; applications and online services must remain the servants, not the masters, of our personal data.

In the near future institutions will not have to select the ePortfolio platform for their students or professionals; it will be an individual choice. On the other hand, educational institutions, professional communities and public healthcare authorities will have the opportunity to develop a number of innovative services, based on the exploitation of the raw data contained in personal data stores. For example, with an Internet of Subjects, data collected by students and trainees for assessment of progress or by trained staff for revalidation could be used, with permission, for other useful purposes such as quality assurance, needs analysis and career planning.

By providing access to raw data in personal data stores (anonymised and under the full control of individuals) to the services of their choice, healthcare professionals and communities would have the foundations to support the development of lively learning communities, for the benefits of their members, patients and society at large. Data collected whilst compiling an ePortfolio is too rich to be limited to a unique usage. We want raw ePortfolio data, we want it now, to contribute amongst other things, to the improvement of the continuing education of healthcare professionals.

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ePortfolios in general dental practice: validating CPD activity for improved performance

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Abstract

Introduction: The Faculty of General Dental Practice (UK) [FGDP(UK)] at the Royal College of Surgeons of England is introducing an ePortfolio to support members to record, evaluate and produce evidence of their continuing professional development (CPD). General dental practitioners (GDPs) and dental care professionals (DCPs) are required to keep a portfolio for a number of purposes, such as registration with the UK regulator, the General Dental Council (GDC), foundation training and contracting with the UK NHS primary care trusts. This paper outlines the findings from the pilot phase of the project in spring 2010.

Pilot phase: Between February and May 2010 a total of 150 volunteers signed up to the pilot project to evaluate the ePortfolio. They were asked to complete 10 specific tasks, thereby providing a structure to the process. The pilot was evaluated from formal feedback collected twice during, and once at the end of the pilot. The informal feedback was also collected and analysed.

Results: The pilot tasks provided a structured learning approach and were useful for building a portfolio online. They aided the navigation which improved with familiarity. The ePortfolio is an excellent CPD tool, facilitating reflection and planning. The ability to keep all CPD information in one place and update assets (records) are important features of the system. The evaluation process provided positive and critical qualitative feedback which is being used for further development and customisation of the system.

Future activity: The ePortfolio will be used for FGDP(UK) educational programmes and assessments in the future. It will also be used by the FGDP(UK) divisions for online discussion forums, communication with fellow professionals and organising professional events, all of which are designed to improve the quality and safety of patient care.

Summary: The introduction of the ePortfolio is a work in progress. The pilot exercise described has provided data to inform development of a career-long ePortfolio for dentistry to manage CPD activity. The evidence can be validated as a measure of demonstrating improved performance for the benefit of patient care.

Introduction

Continuing professional development (CPD) is recognised as a necessary part of professional responsibility and accountability. The demand for quality, effectiveness and efficacy within healthcare requires practitioners to demonstrate their continuing competence to practise by providing evidence of their CPD activity and its impact on their practice. The accepted purpose of undertaking CPD is to enhance the outcomes

of patient care by improving practice through activities like reflection, evaluation and consideration of the evidence base. Thus patients should expect to receive care which is up-to-date, effective and based on sound evidence.

The tool to facilitate the CPD process is a CPD portfolio which is increasingly web-based. The Faculty of General Dental Practice (UK) [FGDP(UK)] at The Royal College of Surgeons of England is introducing an ePortfolio to support members to record, evaluate and produce evidence of their CPD. The FGDP(UK) is a standard-setting and educational body for general dental practitioners (GDPs) and dental care professionals (DCPs) providing CPD opportunities through educational courses, research and assessments.

This paper outlines the FGDP(UK)'s introduction of the ePortfolio and the findings from the pilot phase of the project in spring 2010.

Portfolios in healthcare

Healthcare professionals are expected to maintain a portfolio of their CPD to collect evidence and demonstrate their competence to employers, professional bodies and regulators. Portfolio-keeping facilitates the andragogical concepts of experiential learning [1], learning styles [2] and reflective practice [3] which underpin CPD. The benefits and practicalities of portfolio-keeping are well documented in the literature [4 – 7]. The key benefits include [8]:
- Focuses and organises learning
- Provides a structure for reflective practice
- Facilitates reflective practice
- Provides concrete examples of professional competence
- Assists in personal, professional and career development
- Encourages analytical thinking and provides evidence of learning rather than simply a description
- Encourages proactive, self-directed learning
- Active process brings about change in the learner
- Making a written commitment to change makes actions more likely
- Leads to a connection of learning with day-to-day practice
- Improves practice

The FGDP(UK) ePortfolio - Touchstone™

GDPs and DCPs are required to keep a portfolio for a number of purposes, for example, registration with the UK regulator the General Dental Council (GDC), foundation training, contracting with UK NHS primary care trusts (PCTs) or future NHS commissioners, and from 2011, compliance with the UK Care Quality Commission (CQC). The FGDP(UK) is working with a software provider Pebble Learning on Touchstone™, a customised ePortfolio for GDPs and DCPs. It is important for the FGDP(UK) that the ePortfolio is able to support individuals throughout their career and facilitates the following:
- Effective learning
- Reflection and evaluation of professional practice
- Provision of an assessment tool with different authorisation levels for access determined by the individual

Touchstone™ allows the individual to retain control over their entries, but also has a sharing and discussion facility and an assessment function for some elements of CPD. In the FGDP(UK)'s case, this includes formal postgraduate programmes, Key Skills assessments and membership examinations. Sharing learning and experiences is a valuable peer review function which can validate the individual's learning. The validation of learning is critical; the focus is rightly on demonstrable achievements, but individuals need to go through the process of learning, reflection and evaluation to produce outcomes for validation. However, the conclusions of research on whether there is any relationship between CPD, professional practice and clinical outcomes is mixed [9, 10, 11]. This is in part due to the difficulty of assessing the impact of CPD on practice.

Methodology

In October 2009 the ePortfolio project commenced with the overall aim of developing a CPD tool that is attractive to dental care practitioners and is secure to protect confidentiality. It included an options appraisal of relevant web-based portfolios and it was found that PebblePad encompasses all the principles above. The intended outcomes for the project were:
- Members have a career-long online portfolio to manage their CPD activity
- Evidence can be extracted to meet a range of purposes including membership diploma portfolios of evidence and revalidation
- It is a perceived membership benefit

The project was managed by a project manager and a clinical lead who worked with a core group on the content of the system with the Pebble Learning consultant. The timescale of the project was as follows:
- Production of specification – December 2009
- Structured pilot – February to May 2010
- Customisation – June to October 2010
- National launch – January 2011

Pilot phase

A self-selecting group of 150 GDPs and DCPs signed up to the pilot to test the ePortfolio over three and half months. Volunteers were from a range of professional roles, e.g. practice owners, dental nurses, candidates sitting membership examinations. The pilot was structured, with users asked to complete ten tasks at specified times, some generic and some specific to their professional role. The tasks were designed as a learning process culminating in the production of a 'webfolio' - a portfolio of evidence. They were progressively more difficult using current standards and guidelines in order that users could reflect and evaluate the impact on their practice. Auditing against published standards is key to improved and safer patient care. Users were also asked to use as many elements of the ePortfolio as possible. They were asked to share most of the entries by posting them to an open 'gateway' which enabled everyone to view and comment on others' entries. This provided a peer support forum and also gave the project team informal feedback. There was also a blog on the pilot gateway for volunteers to comment on the system.

The pilot was evaluated from formal feedback which was collected after 6 weeks, 10 weeks and at 14 weeks at the end of the pilot. The evaluation method was based on Kirkpatrick's hierarchy [12] of assessing learning, performance and impact. Qualitative data were collected as these provide detailed and personal information, allow flexibility in the process and enable the perceived reality of individuals to emerge [13]. The data provided valuable descriptive and interpretative information to guide further development.

Evaluation findings

First stage

The first stage evaluation questionnaires were completed 6 weeks into the pilot when task five had been completed. Users were emailed with two options for completing the questionnaire which was seeking feedback on the navigation of the system, the benefits, support and further customisation. Users could either complete through the ePortfolio which was posted to a closed gateway (i.e. they could only see their individual completed form) or those who had yet to log into their account could complete a word document and return it by e-mail. Non-users were asked why they had not logged in and what systems they currently use.

The key findings from users were:
- Navigation is very easy and intuitive
- The system is beneficial for recording CPD as a single accessible tool
- The system provides a structured process and encourages reflection
- Provides an opportunity to engage in interactive peer review
- Excellent support from FGDP(UK) team and Pebble Learning
- The system should be more dentistry-specific

The pilot tasks aided the navigation, although a small number of users had explored the virtual geography intuitively. The majority of users liked the system for having CPD evidence in one place, however, a significant number stated that they would continue to keep a paper-based system as well. At this stage in the pilot, users were finding the process time-consuming.

The key findings from non-users were:
- A lack of time and work commitments had prevented starting the pilot
- All kept a CPD portfolio, either electronic or paper-based system
- Difficulty logging on
- A small number formally withdrew from the pilot
- Some subsequently logged on and joined the pilot

A small minority stated the system was too complex, time-consuming and not relevant to day-to-day practice.

Second stage

The second stage evaluation questionnaires were completed 10 weeks into the pilot and at the end of task nine. The questionnaire was completed through the system and posted to a closed gateway. Users were asked to compare navigation and usage with the start of the pilot. The key findings were:
- Navigation improved with familiarity
- Pilot tasks are very useful
- Majority of users are willing to share their assets (records) to aid the learning process
- The tips and messages from the ePortfolio team are very helpful
- There was a limited contribution to the pilot blog, but it was a useful peer review tool
- Examples of assets should be produced

The majority of users agreed that the pilot tasks provided a structured learning approach and were useful in helping to build a portfolio online. They were satisfied that relevant evidence had been produced, for example, a personal development plan, curriculum vitae and achievement of GDC standards. Sharing assets and the pilot blog on the gateway were useful as a means of gaining greater understanding of the system.

Final stage

At the end of the pilot and completion of task ten, the final evaluation questionnaire was completed. Users were asked about the usefulness of the ePortfolio as a CPD tool, its best features and their plans for future use. The key findings were:
- Excellent CPD tool
- Facilitates reflection through the structured forms
- Encourages planning and updating
- The peer review tool validates learning
- Provides the ability to cross-reference evidence and upload existing CPD information
- Easy to access online and user-friendly
- Continued use will be predominantly for ongoing CPD and preparation for a formal assessment through the FGDP(UK)

A small number of users will continue to use Touchstone™ and also keep a paper version to help their CPD planning. This is partly due to the time to scan copies of course certificates and CPD spreadsheets into the system. The ability to keep all information in one place and update assets (records) were seen as important features of the system. Some users volunteered to support and/or mentor new users.

Some users shared their webfolios on the gateway which provided evidence of their journey and their learning during the pilot. Below are some quotes to reflect the pilot experience:
- *"Having used other ePortfolios, this has been an enjoyable pilot to experience"*
- *"It's been a fruitful 3 months – I feel honoured to be part of a revolutionary project"*
- *"...will be ideal for new graduates to develop post-foundation training….A natural progression and will endorse its use"*
- *"… helpful experience and will make developing my MJDF [membership diploma] portfolio of evidence a lot easier"*
- *"Should be marketed as a personal evidence-based online dental portfolio to aid future revalidation requirements"*

The evaluation process provided very useful positive and critical qualitative feedback which is being used for further development and customisation of the system. The pilot has identified a group of users who can act as 'change champions' encouraging others to use the ePortfolio. The main benefits of the system are the sharing facility and its ability to facilitate the CPD process through a career-long CPD tool.

The pilot has highlighted a number of issues for the ePortfolio project team to address. These include promoting a clear purpose for use to keep the momentum for user engagement, and managing expectations as specific groups would like customisation to meet their needs, such as use for specific educational courses and assessments. The ongoing support from the FGDP(UK) staff will be evaluated as the helpdesk is only available during office hours and many GDPs and DCPs access Touchstone™ in the evenings and weekends. There is a help facility within the portfolio, however, some users prefer human contact. An issue outside the remit of the project team is the IT skills of some users; whilst support will be given on the use of the system, the team cannot provide basic IT training e.g. attaching documents.

Future activity

During the post-pilot and pre-launch phase, while further customisation work is undertaken, there will be semi-structured activity for the pilot users and new users. This will consist of tips and suggestions on CPD activities which will encourage further use of the system. The promotional plan and training strategy for the roll-out of the ePortfolio are in development at the time of writing. Touchstone™ will be used as a support tool for FGDP(UK) educational programmes and assessments in a phased process as students, tutors, lecturers and examiners will require training and support. Students will submit their assignments and clinical cases through the system for marking by tutors and a record of their progress will be kept on the system. A new reflective module for DCPs linked to GDC guidelines has been developed, assessed by a portfolio of evidence which will be compiled and submitted through the system.

Touchstone™ will be used by the FGDP(UK) regional divisions for online discussion forums, communication with fellow professionals and organising professional events, all of which are designed to improve the quality and safety of patient care. FGDP(UK) Board Members will also use the ePortfolio as a communication tool to respond to policy issues and external consultation documents.
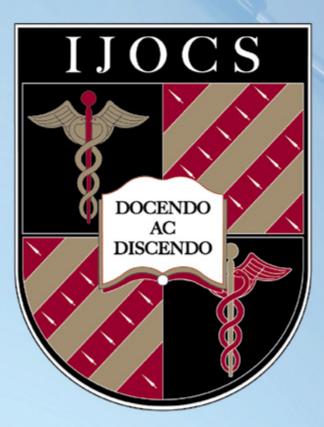
Summary

The introduction of Touchstone™ is a work in progress. The pilot exercise has provided a wealth of data to inform the development of a career-long ePortfolio to manage continuing professional development activity. This will enable general dental practitioners and dental care professionals to collect evidence that can be validated by peers and others, and can be used to meet a range of purposes, including revalidation. Validating CPD as a measure of demonstrating improved performance remains the 'Holy Grail'; this project has the potential to achieve this objective.

References

1. Kolb D. (1984). Experiential learning: Experience as a source of learning and development. New Jersey, Prentice Hall.
2. Honey P, Mumford A. (1992). The manual of learning styles. Maidenhead, UK, Peter Honey.
3. Schon D. (1987). The Reflective Practitioner. New York, Basic Books Inc.
4. Hull C, Redfern L. (1992). Profiles and portfolios – A guide for nurses. Lancaster, Quay Books.
5. Alsop A. (2000). Continuing professional development: A guide for therapists. Oxford, Blackwell Science.
6. O'Sullivan J. (2004). Changing patterns of CPD activity: Evaluation of CPD workshops. Proceedings of the International Ottawa Conference on Medical Education, Barcelona, Spain.
7. Stewart S. (2004). The place of portfolios within continuing professional development. In Chia S H, Harrison D (Editors), Tools for continuing professional development. Wiltshire, Quay Books.
8. O'Sullivan J. (2006). Continuing professional development. In Jones R, Jenkins F (Editors), Developing the allied health professional. Oxford, Radcliffe Publishing.
9. Beggs C, Sumison T. (1997). After the workshop: A model to evaluate long-term benefits of continuing education. Physiotherapy Canada. **49**:279-291.
10. Cervero R. (2001). Continuing professional education in transition, 1981-2000. International Journal of Lifelong Education. **20**(1-2):16-30.
11. Phillips M, Doheny S, Hearn C, Gilbert T. (2004). The Impact of Continuing Professional Development. Bristol, University of Bristol.
12. Kirkpatrick D I. (1967). Evaluation of training. In Craig R & Mittel I (Editors), Training and Development Handbook. New York, McGraw Hill.
13. Finch J. (1986). Research and Policy. London, The Falmer Press.

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