Using Mobile Devices to Support Mentor Assessment of Student Nurse Competence in Practice

Abstract

Student nurses are required by the Nursing and Midwifery Council (NMC) to undertake 50% of their three-year course in clinical practice; this equates to 2,300 hours (NMC, 2010). This paper describes the implementation of an electronic competency-based Practice Assessment Document (PAD) for 30 first-year paediatric student nurses. The requirements for practice assessment in pre-registration nursing are discussed together with the rationale for choosing to use MyProgress. Challenges encountered during the trial are highlighted alongside solutions. Finally, the outcomes of the project are identified.

Keywords

Practice Assessment, Student Nurses, Practice Assessment

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Introduction

The Faculty of Health, Social Care and Education (FHSCE) has 1,500 pre-registration student nurses enrolled on Nursing and Midwifery Council (NMC) approved courses. Our courses are graded as being ‘Outstanding’ for the fit-for-practice category in the review of the nursing and midwifery course provision (NMC, 2013). The FSHCE is continually striving to ensure the experience of students within practice remains outstanding and this led to the development of a computer-based electronic competency framework that communicates with mobile devices in practice via the electronic app, MyProgress (MyKnowledgeMap Ltd., 2015). It should be noted that an electronic practice assessment document (e-PAD) is different from an e-portfolio. The former is used to assess and record competence in practice (in this case to meet NMC registration requirements for nurses) whilst the latter is more usually associated with evidencing career progression and frequently incorporates reflective accounts. Much of current literature addresses the implementation of e-portfolios rather than e-PADs. The challenges encountered in implementing digital assessment in practice may, however, have some similarities.

This report describes the rationale for, design and implementation of the electronic framework. Funded by an Anglia Learning and Teaching Project Award, this project gathered data from February to May 2015, from 30 first-year pre-registration paediatric student nurses who used a digitised adaptation of the existing paper-based clinical practice assessment document to allow them to undertake and demonstrate the NMC competencies while on placement.

Practice Assessment in Nursing

Student nurses on the BSc (Hons) programme are required by the NMC to undertake 50% of their three-year course in clinical practice, which equates to 2,300 hours (NMC, 2010). The assessment of clinical competence in practice is a fundamental part of their course and an essential requirement for registration with the NMC. Citing a string of prominent reports, including Francis (2013), Berwick (2013), Keogh (2013) and Bubb (2014), which all emphasise the need for compassionate patient-centred care, Health Education England (HEE) published the report, Shape of Caring: A Review of the Future Education and Training of Registered Nurses and Care Assistants (HEE, 2013), in which they considered whether current nurse education is fit to achieve this goal. The report highlighted the ongoing need to improve practical learning experiences and development of high-quality mentorship. In addition, the report suggests that technology should play an increased role in the education of the workforce.

An evaluation of a computer-based clinical practice performance record utilised by the University of Queensland (Cooper et al., 2006) identified that it was highly valued by students, preceptors and academics. The trial identified challenges in the clinical setting, which included poor access to desktop computers and the inability of students to leave the patient’s bedside to use the computer. One respondent suggested, ‘give each student / preceptor a laptop with wireless Internet access’. Bogossian et al. (2008) introduced the use of a tablet computer with wireless broadband access into an undergraduate nursing programme as they believed that this would overcome issues around computer access in the clinical setting. Barriers limiting the use of the tablets in the clinical setting included a lack of space in busy wards, and concerns about the security of the tablets and consequently the majority of entries were made at home. Participants did, however, use the tablets to provide education for other students and staff but were hesitant to use them in the presence of patients.

Rationale for decision to use MyProgress

The current paper-based system has limitations:

- It is not possible for tutors at Anglia Ruskin to monitor progress and provide regular formative feedback without visiting the students on placements
- Identification of failing students is dependent upon mentors in practice contacting colleagues at Anglia Ruskin
- Students and mentors do not receive regular communication with, or formative feedback and feed-forward from, personal tutors whilst on placement
• Collecting and collating mentor details is time-consuming
• Collating quality assurance information is challenging (e.g. ensuring timely completion of the Induction programme and assessments)
• Collecting, storing and retrieving data on student progress in practice is disjointed
• Completion of time sheets in practice is a paper-based process, which requires monthly manual submission and checking by the placements office
• Paper-based records are environmentally unfriendly and bulky
• Lost paper records cannot be replaced

*MyProgress* allows for the electronic completion and assessment of a student practice assessment document (PAD) via both a computer web-based environment and/or a mobile tablet device. Compared to the traditional paper-based alternatives, *MyProgress* enhances the ability of lecturers to support and monitor student progress while on placement, on an individual and group basis. It enhances the quality of practice learning, particularly practice assessment, and closely supports mentors with their role. This enhanced monitoring capability allows the rapid identification of, and responsive communication with, students at risk of failure – facilitating early intervention, a key contributor to retention and standard completion. Currently it costs the taxpayer approximately £78,000 to train a nurse over three years (HEE, 2015), therefore identifying failing students early and providing support is essential to ensure this investment is used wisely. Research exploring attrition has reported a wide range of self-reported reasons why students withdraw, including lack of support from mentors and tutors (Orton, 2011). *MyProgress* allows personal tutors to review and support mentors’ engagement with assessment, ensuring consistent and reliable assessment of practice across multiple practice bases. Recommendation 19 from the HEE report (2013) states that to ensure a quality learning environment for pre-registration nurses the NMC should explore the development of a national assessment framework, and *MyProgress* offers a platform to develop such a framework. In addition, the Shape of Caring review includes the advice that, in order to widen access for care assistants who wish to enter nursing, the HEE, in collaboration with employers and HEIs, should support the development of more innovative work-based learning routes.

The decision to choose *MyProgress*, rather than an alternative e-tool, was based on some unique features included in the platform. For example, it offers an approach to develop a national framework for practice assessment and is an innovation that has potential to support work-based learning routes by increasing engagement between students and mentors in the practice area and tutors based at the university. A key feature of the app-based system is that the competency framework can be completed without the need for Internet access, as data can be synchronised later when a connection becomes available. This is essential as most Trust networks have strong firewalls. Also, governance requirements to ensure patient confidentiality and data protection may preclude access to local networks. Internet access is also frequently unavailable to students placed in the community. In addition, a key barrier to completion of electronic documentation in practice has been identified for nurses as a lack of access to computers in the clinical area (Bogossian & Kellett, 2010). Providing students with tablet devices and the app overcomes this barrier. It should be noted that both the NHS e-portfolio (2015) is more suited to recording career development and reflective accounts, rather than demonstration and assessment of clinical competence in the practice area – they are portfolios rather than PADs. In addition, the NHS e-portfolio is currently only accessible to qualified health professionals and pre-registration student nurses, and is not available to medical students.

One significant advantage of *MyProgress* is that it facilitates improved academic practice by preventing the falsification of documentation through email-verified sign-off of assessments. Another advantage is that course leaders using an intuitive graphical user interface can easily customise the competency framework. This facilitates easy development and adaptation of the framework, at any time, to a range of different courses / access routes to the nursing profession. Alternative systems frequently require bespoke design by the software company, with potential delays and cost implications.
Advantages of using *MyProgress*

The following benefits have emerged from the pilot thus far:

- Potential for increased communication and engagement with students and mentors
- Student and mentor acquisition of digital literacy skills
- App download is free for students’ own devices. Works on any platform
- Internet connection not required on placement as the device is synced when the student returns home. As it is not running on hospital systems, firewalls were proven not to be an issue
- Mentors have access to their own portal and student assessments. This provides evidence for their triennial review and appraisal
- Reports / metrics can be extracted from the system providing a range of quality assurance data
- Ability to develop innovative ways to assess students, via, for example, the Objective Structured Clinical Examination (OSCE) function (The General Medical Council is currently using the *MyProgress* app for this)
- Attendance / time sheets can be approved on the device and accessed remotely by the University and digitally checked
- Practice placement evaluations can be incorporated
- Development of a CPD portfolio for CV purposes
- A bank of assessment tools / instruments can be established to prevent repetition for academics and increase sharing opportunities

Implementation

Students involved in the project had an initial two-hour workshop and a follow-up one-hour lunchtime workshop, and completed two mock ‘practice assessments’ prior to commencing in practice. During these workshops it was apparent that many of the students already had confidence in the use of web-based apps. This was evident in the ability of all but a handful of the students to download the app and set up the tablets without any instruction. All students were provided with an 8-inch Samsung Galaxy tablet for the duration of the trial. The education liaison managers at all Trusts granted permission for implementation. Ethics permission was obtained from Anglia Ruskin University Research Ethics Committee (UREC) for student completion of a questionnaire to evaluate their experience of using the *MyProgress* app. The questionnaire was distributed digitally via the tablets for completion.

Lessons Learned

Twenty-nine of the 30 students completed the module. These 29 students and their mentors all successfully completed the assessments on the tablets. Some mentors and students were confused about timings for assessment completion. The project team provided training in the use of the app but did not provide detailed training in the assessment requirements.

As the digital assessment was fundamentally the same as the paper version, the project team assumed that this would be covered as part of the usual curriculum and that the mentors would be able to transfer knowledge of the paper version to the digital version. Unfortunately this was not the case and personal tutors and mentors required further support in the use of the app than had been anticipated. This was compounded by the fact that the trial ran with first-year students who had no previous experience of the paper-based practice document.

To ensure that students had access to all assessments, a decision was made to send the complete framework to the students before they entered practice, which added to their confusion. In future, clarity will be improved by moving to a staged, timed automatic release of assessments, when they need to be completed. An automatic reminder will also be set up to notify mentors and students of submission dates and overdue assessments.
Mentors and students struggled to find completed assessments, as these had been automatically moved upon mentor verification of completion, from the ‘assessments’ folder to a ‘response’ folder, and replaced by a new blank document. This change caused some mentors and students to incorrectly assume that completed assessments were being ‘lost’. Finding the completed assessments was not intuitive on the app. This has been rectified by customising the language used and making a link to ‘completed assessments’ clearly visible. It is also possible to set the system up so that completed assessments are no longer replaced by ‘blank’ documents – this set-up will be used with future assessments. Also, to reduce confusion, mentors and students will be advised to check their computer/web-based dashboard which will also allow them to confirm that completed assessments have been successfully synced.

Mentors and students highlighted that the assessments took too long to complete. The app is designed to be used offline in practice but can be completed online if a connection is available. However, slow Trust networks reduce the speed of the system. Mentors, in future, will be provided with guidance to ensure they are working offline. In addition, mentors require additional training as familiarity with the system increases speed of use. We will also provide advice to move assessments currently being worked on to the ‘favourites’ folder to speed up finding those currently being undertaken. The MyProgress tool is also accessible via a web-based account, which syncs with the tablets. Both students and mentors can access their own account. In the initial trial mentors were not advised of this function. It is likely that some mentors will be more comfortable completing the assessment via a computer (if access is available to an internet PC in the clinical area) rather than a tablet so training in this function will be provided in future.

Data drawn from the system demonstrates that mentors completed assessments late, with some completing induction documentation and mid-point formative assessment at the same time as final summative assessments. This may highlight an existing quality issue that cannot easily be identified in paper documentation which needs to be addressed. Alternatively, it may indicate that the introduction of the digital system itself caused the delay as mentors adapted to the new system. This will be addressed by close monitoring of completion dates via an automatically generated spreadsheet. Automated reminders will be set up to be sent via email and tablets to students and mentors, with an offer of support for those who are struggling.

Under current NMC requirements, mentors are required to complete a ‘triennial review’ in order to remain certified on the mentor register, which is based on records of students they have mentored. Although copies of the documentation were automatically emailed to all mentors, several expressed concern about not receiving them. On investigation there were several reasons for the ‘missing’ emails. Two mentors had used their NHS email accounts to verify the assessment and the assessment was sent to these addresses, but had forgotten which email address they had used, and looked for them in a different hospital email account. The volume of emails received by some mentors also made identification difficult. In addition some Trusts automatically delete emails after one month; so if mentors delayed checking their accounts the emails were no longer available.

Mentors can also have access to the records of all students they have mentored via a password-protected, web-based dashboard, which provides a simple solution for long-term record keeping. Anglia Ruskin has an existing ‘mentor portal’ and adding a link to the student record site on this page, supported with clear advice, will provide ease of access. As trainee mentors sometimes work with a qualified mentor to support the student, the system will be set up to allow access to both mentors.

To fully benefit from the system, personal tutors need to engage with students on a regular basis via their desktop class view of MyProgress. This facilitates direct formative feedback/feed-forward to the students via the app. It became apparent in the pilot that consensus needs to be developed over the exact nature and frequency of this engagement to ensure parity of experience for all students. As with all change projects this will require commitment from the tutors, who will need to be convinced of the benefits.

As with the Bogossian et al. (2008) study, several placement areas expressed concern about the safe storage of tablets in practice. As MyProgress is a computer-based system that syncs with tablets it is possible for students and mentors to complete the assessment via a desktop computer, if one is available, and some placements would prefer students to leave their tablets at home.

As this was only a small-scale project, the limited funding restricted the availability of support to the students, mentors, and personal tutor. It became clear that significantly more training and on-going advice and support would be necessary for successful implementation.
Outcome

The system has been implemented but not fully evaluated. A full evaluation will take place in the 2015/16 academic year with 200 second-year student nurses across Cambridgeshire and 25 work-based learning students. The initial trial was successful in providing proof of concept and generating external interest in the project resulting in a research grant of £100,000 to extend the trial.

A video of the project was accepted by JISC for inclusion in a toolkit on innovations in assessment on their website. At the time of writing the project has been presented at three conferences and the project lead has been invited to provide guidance to ten HEIs in Scotland on digitalisation of a common practice framework for nurse.

The Anglia Ruskin / JISC info toolkit video can be viewed here: https://myplayer.anglia.ac.uk/Play/3624

References


