

Using portfolios to learn about prescribing: Qualitative insights into students' experiences

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Abstract

In the UK, pharmacists have recently started to take on new roles in relation to the prescribing of medicines. As a result, a reflective portfolio was developed and introduced into the final year of the undergraduate pharmacy curriculum at the University of Manchester to support the students' learning about prescribing. This study reports on qualitative analysis of the prescribing portfolios, examining specifically the students' perceptions of what they had learnt by completing the portfolio. In general, the students were in favour of using the portfolio to support their learning about prescribing, acknowledging that this had helped them to broaden their appreciation of all the stages in the prescribing process, and bridge differences between the taught components in the degree course and practice experience. Preparing the portfolio had also encouraged the students to build on their learning from other modules, recognise the inherent uncertainty associated with decision-making and to reflect on their future learning needs in relation to prescribing.

Keywords: *Pharmacy, prescribing, portfolio, qualitative analysis*

Introduction

In the UK, a number of significant reforms have taken place within the health service, such that pharmacists are starting to take on new roles including the prescribing of medicines to patients. Mandatory continuing professional development (CPD) has also recently been implemented within the pharmacy profession. As a result, there are ever increasing demands for reflective practice and skills appropriate for audit, appraisal and professional revalidation. These demands are further emphasised by the Royal Pharmaceutical Society of Great Britain (RPSGB) in its requirements for training programmes to prepare pharmacists as prescribers, in which it states that "pharmacists should be able to demonstrate a reflective approach to continuing professional development of prescribing practice" (RPSGB, 2002). This links closely with the recommendations issued by the Dearing Report (1997), which prompted higher education institutions to acknowledge more firmly that students require the necessary skills to

become lifelong learners. The report recommended "the introduction of a Progress File designed for people to use throughout their lives" which should include "recording student achievement" and act as "a means by which students can monitor, build and reflect upon their own personal development" (Dearing, 1997).

Reflection is a concept that is central to two major theories of learning, namely experiential and deep learning. In the context of experiential learning, reflection is the process of purposefully examining experiences in the practice-based setting in order to learn from them (Kolb, 1984). Kolb (1984) describes a learning cycle whereby learning needs are identified through structured reflection on experiences. These needs are then fulfilled by educational activities, and the cycle is completed by applying the new learning to professional practice, and in the process, identifying further learning needs arising from the new experience. With deep learning, there is an attempt made by the student to understand concepts, processes and

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ideas, and to evaluate and build on previous knowledge (Pee, Woodman, Fry, & Davenport, 2000).

In 2002, a prescribing module was introduced into the Master of Pharmacy (MPharm) degree course at the University of Manchester (Hall & Ashcroft, 2005). This module is now in its fourth year and during its development it was decided to explore the use of portfolios mainly with a view to better connecting theory with practice by enabling evidence from a number of different aspects of the curriculum to be brought together in one document. It was also felt that a prescribing portfolio would encourage students to reflect on their own records and evidence of achievement in terms of prescribing, identifying their future learning needs, and thereby helping them to develop skills for lifelong learning and CPD. The aim of this study was to examine in-depth the students' experiences of using the portfolio and determine what role it played in learning about prescribing in the MPharm degree course.

Methods

The findings presented are part of a two-year study (2004–2005) evaluating the use of the prescribing portfolio. We draw on data derived from documentary analysis of all the portfolios submitted by the students over this period ($n = 204$). The portfolio consisted of two major sections: firstly, a collection of evidence of events and experiences, and secondly, a reflection by the student on what had been learnt. Within the reflective component, students were specifically asked to think about what they had gained (if anything) by completing the portfolio, whether the portfolio enabled them to identify factors that had helped them to learn about prescribing or any problems or challenges that they had experienced.

We used a grounded theory approach to analyse the data so that questions and themes that emerged in the early portfolios were explored and tested with findings from subsequent portfolios (Strauss & Corbin, 1990). We developed a coding frame for categorising and sorting the data into relevant themes, which were compared and contrasted using the constant comparative method. Both authors independently read the portfolios and reflected on the content, and subsequently discussed the findings with each other to assist in identifying patterns and helping to place events within a relevant theoretical framework. Quotations from the portfolios are used as illustrations of themes and categories.

Results

Students' views about using the prescribing portfolio

The majority of students had no prior experience of using portfolios to support their learning, and found

that this approach was at odds with how they had traditionally gauged the assessment of their work.

There was some ambiguity as to what we needed to do to produce a good portfolio, partly because we have to come up with questions as well as answers. This is something I am not used to in assessments [44].

Rather than just finding information and repackaging it, it required a lot of thought about our experience as a whole with less of the restrictions that essays place on you. However, I would feel uncomfortable if a large majority of the course was conducted in this way as it is not a way of working I am familiar with [27].

Nonetheless, the students expressed very positive views in relation to completing the portfolio. They felt that this was a practical way of documenting their learning that was related more to real life situations than other approaches used in their degree course.

I found it a lot more relevant than writing essays as it allowed me to relate to and think about real situations and not just information from texts [134].

Most students felt that the portfolio had broadened their appreciation of all the stages in the prescribing process, bridging differences between other modules in the course and practice experience.

Completing the portfolio has helped me by covering the whole picture of prescribing. It demonstrates all the different types of prescribing and illustrates the situations to which they apply [67].

The portfolio, together with the prescribing module, has defined the term "prescribing" for me, by being able to put theory into practice [75].

Students' approach to learning about prescribing

Many of the students felt that the portfolio had allowed them to develop a "more logical" approach to prescribing. For instance, some students relied heavily on clinical guidelines as a way of breaking down processes into smaller steps or serving as a checklist to ensure that all relevant issues had been considered.

I will look at guidelines for step-by-step treatment. This will help to include everything that needs to be considered for a particular disease [1].

My interactions with patients will be much more structured as I focus the questions and answers to acquiring the information I require to best advise the patient [38].

Others suggested that the portfolio had helped them to take a "step back", consider the patient as a whole and think more laterally when solving problems.

It helped me to see things from the patient's perspective, such as his/her needs, knowledge and beliefs [12].

It makes me think laterally and put my knowledge into a working situation [180].

I've learnt to appreciate to take a step back and look at influencing factors about making prescribing decisions and not to take prescriptions at face value [111].

Reflection on learning experiences

The students often acknowledged that the portfolio had encouraged critical self-reflection about prescribing, and highlighted how this might subsequently shape their approach to learning from past experiences.

I will try to record memorable situations so I will be able to reflect on what I did and how I could handle the situation better or differently next time [94].

For most, the greatest strength of the portfolio related to the fact that it enabled them to identify links and build on knowledge from different modules within the undergraduate degree course.

The portfolio highlighted the way all the modules we have previously studied and continue to study interlink. I now recognise how it is more beneficial to look at the course as a whole rather than individual units. Situations I would not have thought relevant now have a much more important role with many more learning points than I first thought [77].

This had encouraged some students to identify how other modules within the undergraduate course could support their learning about specific topics.

In the future I will look for ways things link together rather than treating each section of the course as an isolated module. I will look for ways learning in one module can support learning in another [130].

Several factors appeared to influence the choice of entries about prescribing that were documented in the portfolio. In the majority of cases, entries related to the students' experiences from clinical placements, lectures at the university, and other work experience that the students had undertaken in pharmacies. Some of the students targeted areas of the curriculum in which they felt that they had least knowledge, thereby specifically directing their efforts to address their own personal learning needs.

The situations that I chose were mostly in areas that I had least knowledge in. That way, I knew I would have to do some research and re-read information I had forgotten from before [48].

This portfolio has improved my knowledge on certain topics but at the same time identified where I need to perhaps read a bit more on a topic [106].

Knowledge and understanding about prescribing

The students provided many examples of how the portfolio had improved their knowledge about prescribing. These included a much greater insight into disease states, role of prescribing guidelines, place of "off-licence" prescribing and using supporting reference material, such as the British National Formulary (2005). Many students felt that the portfolio helped them to develop a greater understanding of the complexity of prescribing and the responsibility that it entails. Specifically, this included making judgements in areas of uncertainty, recognising that prescribing was often associated with decisions concerning tradeoffs between potential benefits and risks.

I have realised that there is not always a right and wrong answer but often many options. One must balance risk versus benefit when considering prescribing in any context [115].

In addition, many students recognised that in practice they were likely to encounter situations that would warrant referral to other health care professionals rather than trying to deal with situations that were beyond their own competence.

It has helped me to determine that in some situations it is necessary to refer to a more specialised person and not to try and decide something you're not sure about yourself [79].

Difficulties faced in completing the portfolio

The students encountered a number of difficulties when completing the portfolio. In part, this stemmed from their unfamiliarity with the subject matter such as their prior knowledge about the roles and responsibilities of different members within the prescribing "team".

Prescribing in a team context was very challenging, as this had not really been covered before in other modules [34].

Some students had never encountered some of the prescribing situations (such as off-licence prescribing), and struggled with the development of hypothetical case scenarios that would meet the requirements of the portfolio.

Trying to think up scenarios that we know little about or that we hadn't really experienced ... was very challenging [53].

In addition, some of the students had difficulties coming to terms with the added responsibility that prescribing would bring and also knowing where the boundary of their responsibility lay.

It was difficult in knowing the boundaries, i.e. when to refer to another health professional or whether it was something you could deal with on your own [40].

Preparation for future professional roles

For many students, completing the portfolio had resulted in a change in their perceptions about the role of pharmacists in relation to prescribing.

Before this portfolio, I thought that prescribing was not very important for pharmacists. But now this perception has changed [23].

In general, the students believed that the process of completing the portfolio helped them to prepare them for future professional roles. In particular, the students often stated that the portfolio had been useful preparation for their pre-registration training.

It has provided me with the skill of applying my knowledge to “real-life” situations with patients, which I know is of vital importance for my pre-registration training. I feel that it has prepared me for this [87].

Preparation for CPD was also an important aspect of the portfolio for many students.

I feel more alert and aware about recording my experiences, which will help me in the future with CPD once I qualify as a pharmacist [98].

In addition, some students felt that this had improved their confidence when dealing with patients.

I have gained confidence, thinking that I don't know anything, I can see that I do really [25]!

Discussion

This study has demonstrated that a prescribing portfolio can be developed that appears to meet the needs of pharmacy students in terms of relevance to their professional practice, that builds student confidence, promotes reflection on learning and assessment of their learning needs. The findings also suggest that the students found the portfolio to be a useful means for learning about prescribing. In particular, its ability to draw attention to links between different modules in the undergraduate course appears to have been most welcome. Typically, evidence was drawn from other taught modules, from

hospital tutorials, and from the students' own work experience in pharmacy. In this way, the portfolio was able to cover a much wider range of issues than would have been possible from the taught sessions alone.

There were very few instances where students were uncomfortable using the portfolio and those that were cited were due to a lack of familiarity with either the prescribing area or the method of assessment. The former can be used to support the students' learning by helping them to identify areas for further development. The latter is perhaps understandable considering the novelty of this approach within the undergraduate pharmacy degree course in the UK. It is hoped that encouraging students to think laterally across different areas to solve problems will be useful preparation for their future professional development, as this more closely mirrors the practice environment in which they will ultimately play a professional role.

In recent years, there have been some important changes in the pharmacy profession with a greater emphasis on revalidation and providing evidence of self-learning and CPD. This study confirms the previously reported findings that portfolios can encourage reflective practice and self-evaluation, contextualise learning and link experience with personal interpretation (Davis et al., 2001; Friedman et al., 2001; Lonka et al., 2001). The findings also suggest that portfolios can provide a framework for CPD, and the skills learnt by pharmacy students in completing this task may further support their future career development. Previously, we have found that over 70% of the pharmacy students felt that a portfolio would be a good means of documenting their CPD (Ashcroft & Hall, 2006).

If portfolios are to be used as a means of summative assessment then it is important that they have explicit criteria linked to specific learning outcomes. Friedman et al. (2001) suggest that it is important to standardise the presentation of the portfolio to enhance its reliability, for instance by determining the type of work to be submitted (case studies, projects, essays, etc.). However, Pitts, Coles, and Thomas (2001) argue that too structured an approach might lose some of the appeal of the portfolio concept. In the prescribing portfolio, we used a structured format, but still found that the students drew on a wide range of resources when documenting and reflecting on their learning experiences. Nonetheless, we would agree that one of the biggest challenges facing portfolio assessment in the future will be to judge the qualitative and quantitative evidence and yet maintain reliability and validity of the judgement (Friedman et al., 2001). This being the case, future work will be needed to support the development and evaluation of comprehensive, reliable and valid assessment criteria.

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