

Self-directed learning: preparing students for lifelong learning

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Abstract

Introduction

CPD is likely to be an important element of the revalidation process. Engaging in self-directed learning as an undergraduate student will help individuals develop the relevant skills to direct their own future learning within the CPD framework.

Module description

Three self-directed learning units were introduced to the Level 4 Pharmacotherapy Module of the MPharm programme at Queen's University Belfast.

Evaluation

A short questionnaire was administered to students to determine the extent to which they had engaged in self-directed learning and the value of this learning. Fifty seven percent of students had engaged in the self-directed learning and reported positively regarding the experience. The remaining 43% who failed to engage did not view self-directed learning as a priority.

Future plans

To ensure that graduates are produced who are capable of engaging in self-directed learning and thus CPD, self-directed learning should be introduced at an earlier level in the undergraduate curriculum.

Introduction and Context

Five different modes of learning/teaching are recognised by educationalists and are used to differing extents within pharmacy undergraduate education, namely, exposition, discussion, enquiry, activity and collaboration. Exposition is the direct presentation of ideas and skills by the tutor, for example during a lecture and it is a method of passive learning. Discussion is defined as learning by sharing of ideas, such as that seen in small group teaching sessions. Enquiry is learning by active investigation of a topic, as in the completion of an assignment. Activity is defined as learning by doing, such as project-based or self-directed learning. Collaboration is characterised by learning in small collaborative groups. There are advantages and disadvantages associated with each of these modes of learning; as students have different learning needs, it is important to adopt a wide range of teaching methods that will stimulate the range of students within any given group (Entwistle and Hounsell, 1975).

Within the current climate, healthcare professionals worldwide are being encouraged to ensure continuing competence within their professional practice (Watkins, 1999). The pharmacy profession is no exception and has

introduced a system of mandatory continuing professional development (CPD) which is a 'cyclical, process of reflection, planning, action and evaluation' based on Kolb's learning cycle (Royal Pharmaceutical Society of Great Britain, 2007). To engage in CPD, pharmacists must identify their personal learning needs by reflecting on their professional practice (reflection), identify appropriate methods by which to meet the learning needs (planning), engage in the learning activity (action) and ultimately, consider the impact of the learning on their professional practice (evaluation). All stages of each CPD cycle must be clearly documented. Effective and meaningful engagement in CPD to enable pharmacists to continually develop their competence requires pharmacists to develop the skills and attributes to direct their own learning appropriately (Jubraj, 2009). To prepare for this ongoing self-directed learning during their professional career, pharmacy graduates need a firm foundation in managing and directing their own learning. It has been reported that teaching students how to be self-directed makes them self-directed (Norman, 1999).

A number of studies have shown that pharmacists engage in CPD to a limited extent at present (Bell et al., 2001; Haughey et al., 2007) and it is our belief, and that of others, that the

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MPharm degree should be designed to develop such skills (Jubraj, 2009). The integration of self-directed learning methodology into the pharmacy undergraduate programme could help students to develop the necessary skills and attitudes to direct their own future learning.

There are many different definitions and models of self-directed learning defined in the literature (Knowles, 1975; Schmidt, 2000; Kaufman, 2003). These definitions relate to both the experience of the learner and the context of the learning and indeed it would appear that a continuum of self-directed learning behaviour exists depending on who is in control of the learning. Whilst acknowledged as adult learners, undergraduate students do not possess the necessary self-awareness or skilled behaviour to identify their own areas for development and, as such, only degrees of self-directed learning can be introduced to students when delivering an undergraduate curriculum. Self-directed learning in this context is described as preparedness of the student to engage in learning activities which support pre-defined learning objectives, ensuring the learning is of a suitable level to enable the individual to engage in summative assessment. The aim therefore in introducing self-directed learning to this group was two-fold; to develop the individual's knowledge in relation to the given topic areas and to develop the learner's capacity to become an inner-directed, self-operating learner.

Description of module

The pharmacotherapy module taught in Level 4 of the MPharm degree programme at Queen's University Belfast has traditionally been taught using exposition methods of learning. Self-directed learning was introduced in response to student feedback which highlighted that there were too many formal lectures and workshops contained within the module. Therefore, it was decided that a proportion of the module would be delivered by the activity mode of learning in the form of self-directed learning. It was hoped that the introduction of some material by self-directed learning would facilitate more flexible or open learning (Walkin, 1990) and would encourage deeper rather than surface learning (Tennant, 1993). Three topic areas were identified as suitable for self-directed learning, namely, musculoskeletal disease, infectious diseases and tropical diseases.

Details of the self-directed learning units are provided to the students in the student information booklet that they receive at the start of the semester. An overview of each of the three self-directed learning units is delivered via a lecture format during which the learning outcomes associated with each unit are highlighted. Students are directed towards some relevant journal articles which are easily accessible either via the University Library or electronically via Journal websites.

However, students are also expected to engage in additional learning to ensure that they have addressed the learning outcomes relating to each self-directed learning unit. In this respect, students are directed regarding what they need to know but have relative flexibility regarding the manner in which they acquire the knowledge. A member of academic staff (MT) is available to support and assist those individuals who have difficulty in engaging with this method of self-directed learning.

Evaluation

To determine student views on the value of self-directed learning, a short questionnaire was devised and administered as part of the module review at the end of the semester. The questionnaire asked the students whether they had actually engaged in the self-directed learning and if not, to honestly answer why not. If they had engaged, they were asked to respond to further statements, using 5 ordinal responses (Likert scale) from "strongly agree" through to "strongly disagree".

Results

Forty four of the 120 students (37%) who had studied the Pharmacotherapy module completed the questionnaire. Of the 44 students who completed the questionnaire, 25 (57%) had engaged in the self-directed learning and 19 (43%) had failed to do so. The reasons why the 19 students had not engaged in the self-directed learning are shown in Table I. Of the 25 students who had engaged to some extent, 4 (16%) had accessed learning materials but had not actually engaged in any active learning and were, therefore, unable to answer the series of questions regarding its usefulness. The remaining 21 students answered the questions relating to the usefulness of the self-directed learning units and the results are shown in Table II. Significantly, the majority of students who had undertaken the self-directed learning reported that it complemented information provided in the lecture series with 65% of responses in the strongly agree or agree categories. Similarly, the majority of students strongly agreed/agreed that the self-directed learning was relevant to the topic (62%) and added to their understanding of the topic (64%).

Discussion

Those students who took responsibility for their own learning and engaged in self-directed learning found it beneficial and it would be our hope that this learning method will have motivated the students and instilled in them the need to take responsibility for their own learning.

Unfortunately, the majority of the students surveyed did not

Table I. Reasons for students not obtaining self-directed learning units

Reason for not obtaining self-directed learning units	Number of students (%)
Lack of time/Too much other work	11 (58)
Intend to obtain directed reading prior to exam	6 (32)
No response	2 (10)

Table II. Student responses regarding the usefulness of self-directed learning units

Statement item	N (%) students who responded to the question in each category				
	Strongly agree	Agree	Neither agree/disagree	Disagree	Strongly disagree
The self-directed learning complemented information provided in the lecture series	3 (14)	13 (62)	3 (14)	1 (5)	1 (5)
The self-directed learning was relevant to the topic	5 (24)	12 (57)	3 (14)	1 (5)	
The self-directed learning added to my understanding of the topic	2 (9.5)	13 (62)	3 (14)	2 (9.5)	1 (5)

embrace the concept of self-directed learning. Some reported that they were too busy doing other work and indeed competing interests is one of the seven characteristics common to the majority of adult learners as identified by Rogers (1998). Others reported that they did not see self-directed learning as a priority but as something to be done prior to the exams. It is widely acknowledged that the learning of undergraduate students tends to be assessment-driven and indeed this is another reason as to why self-directed learning for undergraduates must differ to the model applied to qualified practitioners. However, it appears, that attempts to promote deeper rather than surface learning as espoused by Entwistle and Ramsden (1983) have not been completely successful within this undergraduate module, as promoting self-directed learning has, for some students, encouraged cramming and shallow learning at the expense of deep learning (Brown and Knight, 1994). It could be that delivery of less learning by the exposition mode (ie. formal lectures) could promote more effective learning for pharmacy undergraduate students. Hence, a huge challenge exists in future delivery of this module and in the delivery of all aspects of the pharmacy undergraduate curriculum to focus on the Maslow model (Tennant, 1993) thus ensuring that we provide the ultimate motivational experience for learners and instil in them, the need to learn in order to prepare for future professional practice. By doing this, we would be promoting a culture of self-directed, life-long learning to ensure professional competence.

For self-directed learning to be beneficial to learners, the learners must be motivated and self-disciplined to engage with the learning. Race and Brown (1995) have highlighted the role of the tutor or workplace mentor in helping learners to realise how open learning works; for example, the importance of 'learning by doing' must be highlighted to ensure that learners do not omit the doing opportunities thus reducing the impact of the learning. The use of self-directed student learning within this module, could be further enhanced if the learning was part of group work, as a group working in a collaborative fashion usually achieves their aims and the learning experience is likely to be enriched for all (Jaques, 1991). In future, it may be beneficial for the students to be divided into small groups with each member of the group responsible for studying a particular aspect of the topic and then explaining this aspect of the work to the other students in the group. This would have the additional benefit of improving the students' communication skills and ensuring that all students participate fully in the task.

The increasing use of technology in education is changing the role of both learners and tutors within the learning process and self-directed learning could be further facilitated by integrating technology into the learning process. Keegan (1991) realised the essential role of educational technology in open learning opportunity in the early 1990s. Technology could be used to help improve the overall efficiency of the teaching/learning process by facilitating both the learner and the tutor to achieve more effective learning outcomes. User-friendly, interactive computer packages may be more appealing to undergraduate students than simply reading journal articles. Technology could also be used to enhance student collaboration within group work. To promote interaction between groups, e-mail discussion forums or chat rooms could be established to allow students studying a specific self-directed learning unit to discuss their learning experiences and the member of staff responsible for that unit could routinely check the discussion forum and answer any questions the students posed. This could prove very valuable to the learning process as the individuals may develop a greater understanding of the topic by learning from each other as it is clearly recognised that students learn more effectively via interaction with other learners (Askew and Carnell, 1998). Due to the collaborative nature of this method of learning, learners would increasingly engage in processes of active learning and team learning thus enriching their learning experience. Although the initial introduction of technology to the learning process would be time consuming and require increased input from the tutor, once discussion groups and e-mail lists have been established, the learners could work and learn independently from the tutor. This learning method would move learners more towards a model of independent learning with the learning becoming self-directed (Ellington *et al.*, 1993), thus developing the skills required for lifelong learning.

CPD is likely to become one component of the larger, more complex, revalidation process. It is essential therefore that we encourage students to develop the skills required to monitor and manage their own learning throughout their professional career. To fully achieve this, student centred self-directed learning may need to be more fully integrated within the MPharm degree programme with students being introduced to the concept at Level 1. As they progress throughout their degree, the students should be encouraged to take greater responsibility for their own professional growth and learning and be supported in their engagement with self-directed learning. Indeed, Mills and Black (2009) report that even

newly registered pharmacists require support and guidance regarding their development needs and this must be considered in delivering post-graduate curriculums. However, in introducing self-directed learning within the undergraduate curriculum, graduates will have started on their journey towards becoming self-directed learners who have a commitment to lifelong learning and with support and guidance will be capable of ensuring their ongoing competence and growth as healthcare practitioners for the duration of their professional career.

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