Learning and teaching

Many health librarians have roles that include teaching responsibilities. For most librarians there is absolute clarity that the purpose of the taught sessions is to enable the health student to be an effective and successful learner. There is also likely to be an intention to ensure that the clinician is able to make clinical decisions based on evidence. These outcomes (which may be clear to the librarian) may not necessarily be obvious to the learner. This column by Chris Dillon explores the concepts around learning outcomes in more details and illustrates the importance of addressing learning outcomes. The learning experience can only be enhanced if the learning outcomes are commonly shared by the librarian and by the learner.

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Learning outcomes: making learning and teaching explicit

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At the time of the publication of the Report of the National Committee of Inquiry into Higher Education1 in 1997, chaired by Sir Ron (now Lord) Dearing, a colleague wryly commented that, despite a lukewarm reception among the Higher Education (HE) community, it was ‘not so much a damp squib, more of a ticking time bomb’. And so it has turned out. The impact of the Dearing Report and the subsequent work of the Quality Assurance Agency (QAA), which was charged with implementing the Report’s recommendations, have had a profound impact on UK higher education.

The Report covered all aspects of HE, but for learning and teaching Recommendation 21 was key:

‘We recommend that institutions of higher education begin immediately to develop, for each programme they offer, a “programme specification” which identifies potential stopping-off points and gives the intended outcomes of the programme in terms of:

• the knowledge and understanding that a student will be expected to have upon completion;
• key skills: communication, numeracy, the use of information technology and learning how to learn;
• cognitive skills, such as an understanding of methodologies or ability in critical analysis;
• subject-specific skills, such as laboratory skills’.

Requiring universities to spell out the ‘intended (learning) outcomes’ of a programme was a radical step. As Coats2 pointed out, in a critical analysis of the impact of learning outcomes on the way the curriculum is designed and delivered in the UK, ‘Institutions had described their programmes and awards—their courses and degrees—in many ways and for various audiences but never in a format that was compulsory. Most significant—and controversial—was the expectation that not only should these “programme specifications” clearly state the learning outcomes for each award but that four categories of outcome were prescribed’. Since the Dearing Report was published, HE institutions have been grappling with the idea of learning outcomes and the far wider implications of the shift towards an outcomes-based approach to the curriculum.

What is an outcomes-based approach?

A simplistic, but perhaps not wholly recognizable, model of teaching is that the tutor focuses on the content and level of the course, prepares and delivers the material and, at the appropriate times, devises assessment tasks that will test the students on what they have learnt. The students, for their part, try to make sense of the material.
and work out what the tutor will be looking for in the assessment that will result in good marks. Able students who have been successful as strategic learners in similar situations are as likely to do well in this environment as any other; students who lack their peers’ learning skills, confidence and survival instincts may find it far more difficult to achieve their potential. As HE moves towards wider participation, the challenge is to find ways of engaging effectively with students with a broad range of learning skills and quite different experiences of learning.

An outcomes-based approach attempts to change the traditional model and shift the emphasis from the tutor to the student, from teaching to learning. This shift may be controversial but the goal is to enhance learning by helping students know what to expect from their course. The approach aims to:

• make the curriculum, and the demands and achievements of study, clear to students and others (for example, employers and professional bodies);
• help students develop as autonomous and lifelong learners, able to adapt and learn for themselves in a rapidly changing social and economic environment.

Learning outcomes are about what the student should know, understand and be able to do as a result of a period of learning. They are indicators of what students will need to show they can do in assessment activities, and what they will be able to claim they have achieved. Learning outcomes are not just about knowledge and understanding, although that is important, but by focusing on what students can do outcomes put emphasis on skills, and how knowledge and understanding can be demonstrated.

The notion of an intended outcome is also important here, and has implications for both the teacher and the student. Intended learning outcomes are the teaching objectives of the course; the collection of attributes, skills and knowledge that the teacher wants the student to come away with. But learning is an intensively personal activity and there can be no guarantees about success or achievement in any individual case. However, by being explicit and open about what the course is setting out to do, what the assessment will focus on, and what criteria will be used to judge the quality of students’ work, both the student and teacher are working within a common framework and language.

This is not to say, of course, that statements about learning outcomes and assessment criteria are sufficient on their own. A set of learning outcomes, however clear, cannot capture everything about the intentions of the teacher or the learning experience of the student, and neither should it attempt to do so. Outcomes should be seen rather as the key features of a particular learning landscape that are relevant to the purposes of the course. Students will bring to their learning journey different backgrounds, and will travel through the landscape in different ways and at different speeds. Each student will need to understand what the outcomes mean for them, how they can achieve them, how the outcomes relate to the assessment and how their work will be judged. There will almost certainly be a need to discuss and, in some cases, negotiate meaning, but the aim of an outcomes-based approach is that there is no hidden agenda.

A framework for learning and teaching

Adopting an outcomes-based model profoundly influences course design and delivery. For the teacher, the first step should not be about what content to include but what learning outcomes, relevant to the purposes of the course, students are expected to achieve. The resources associated with a course, for example, lectures or learning materials, assessment tasks and criteria, tutorials, computer-based activities, and personal development planning opportunities should be designed to support the development and achievement of the outcomes.

Biggs describes this coming together of the components of courses to help students better understand their role in the learning process, as ‘constructive alignment’. In constructivist theory, students do not learn passively from their teachers but rather construct knowledge and meaning for themselves out of their learning experiences. Biggs argues that getting away from a model in which a passive student is ‘taught’ to one in which a student is actively engaged in learning builds student
confident and a better understanding of what is necessary for them to succeed. Alignment occurs when ‘All components in the system address the same agenda and support each other’ (p. 26).

For the student, the learning outcomes describe the key learning goals they should be aiming to achieve on completion of their course. But they also play several other roles as:

- a focus for both formative and summative assessment activities;
- a framework against which specific feedback on the student’s work and progress can be given by the tutor;
- a framework for students to self-assess their own progress and ask for help in specific areas;
- a language for students to articulate to themselves and others what they have gained from their course.

Assessment is increasingly recognized as a driver for learning, in the sense that students are motivated to learn what they know they will be assessed on. Where a student completes several assessments during a course, the outcomes can be seen as developmental and revisited several times. If early assessments are wholly formative, the incentive is that students gain useful feedback which they can use to improve their marks when they are assessed summatively later. The point here is that assessment and feedback should be referenced to the learning outcomes so that the student gets a consistent and developmental view of their progress.

Viewed like this, learning outcomes are not just a series of statements but a resource for learning and teaching. More pragmatically, encouraging students to see assessment as a series of milestones or checkpoints on their learning journey—not as a set of hurdles to jump and forget—prompts them to engage explicitly with the outcomes they must demonstrate if they are to do well in the course.

Recent work on assessment and feedback, for example, the FAST project (Formative Assessment in Science Teaching at http://www.open.ac.uk/science/ftd/) and the SENLEF project (Student Enhanced Learning through Effective Feedback, available through the Higher Education Academy website at http://www.heacademy.ac.uk/senlef.htm) offer principles for effective use of feedback in student learning.

### Outcomes as language

Encouraging students to think about how they are learning, as well as what they are learning, extends the learning experience beyond subject content. An outcomes-based approach also implies that students are engaged with ways of talking about their learning—and that this is a legitimate topic for academic conversation and development. Learning at HE therefore can be viewed explicitly as a transformational process in which outcomes start off as statements about the aims of teaching and end up as ways in which students can describe and demonstrate, by giving examples from their courses, what they have learnt and what they can do. Ownership of the outcomes, that is to say, passes from the teacher to the student, and gives the student a language to articulate their knowledge and skills to themselves and to others.

The process by which students build their skills and knowledge, usually called ‘learning how to learn’, was emphasized in the Dearing Report,¹ is an integral part of QAA guidance to HE institutions, and features in many lists of learning outcomes as a key skill that all students should develop. Learning how to learn is generally regarded as a higher level or ‘meta’ process in which students are encouraged to become more aware of how they learn, what they can do to improve their learning, and how they can adapt to new learning situations. Coats² describes in detail the metacognitive processes underpinning learning how to learn. Overall, the focus is on motivating students to take responsibility for their own learning.

Learning how to learn—and learning how to talk about learning in an appropriate way—is seen increasingly as an important aspect of employability (see, for example, http://www.heacademy.ac.uk/Employability.htm). Being able to communicate and work in teams effectively, find and critically evaluate information (information literacy), and consciously engage with new and informal learning situations, are part of the wider range of skills necessary to succeed in an increasingly uncertain job market. In moving from HE into employment or, in the case of many adult and part-time students such as those at the Open University, in further career development, students
need to be able to translate the skills they have developed in an academic context into the language used by employers to describe the abilities of the people they are looking for. Being aware of what they have gained from their course that is valued elsewhere is an important outcome of learning in its own right.

Learning and teaching at HE is a multi-dimensional process which involves emotional as well as intellectual engagement, the development of self-confidence as well as demonstrable skills and knowledge, and needs time for each individual to come to terms with their own goals, expectations and personal development. The learning-outcomes approach is not a universal panacea but a step towards raising the awareness of the individual to their own skills and knowledge, to enable them to more confidently articulate that awareness, and to go on to learn further.

References