Assessing learning needs

Clinical teachers and educational supervisors work with a range of students and trainees on different programmes. Learners from diverse backgrounds have different learning needs which can be difficult to assess. Teachers who pay attention to individual learners' needs will help learners get the most from their training. This can be enhanced through the use of tools such as professional development plans and formal assessments.

This article explores the role of the clinical teacher in assessing the learning needs of students or trainees in the context of organizational and professional requirements. It considers how teachers can support individual students or trainees in formal and informal teaching situations and as part of their continuing personal and professional development and discusses some of the tools and techniques used for assessing learning needs.

The role of the clinical teacher

The role of a clinical teacher is complex. Teaching activities are often combined with clinical commitments and you may work with learners at different levels and with different professional requirements. Harden and Crosby (2000) define twelve different teaching roles (*Table 1*).

One of the main tasks of a clinical teacher is to support students or trainees in their professional development. This includes helping students and trainees to acquire clinical knowledge and skills, facilitating the development of appropriate professional attitudes and fostering self-directed, lifelong learning. One way of thinking about one's role in relation to learners is to think in terms of the trainees' or students' 'learning journey'. Planning the journey and assessing learning needs is an essential part of the journey.

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In medicine, learners are working towards a professional qualification therefore their formal learning outcomes are already defined, typically as a written curriculum, syllabus or programme of study which is assessed according to stated criteria. Each teaching or learning event needs to be relevant to the overall programme. Making oneself familiar with the intended or expected learning outcomes is a vital first step in assessing learning needs and planning teaching and learning activities.

Because learners' past experiences, learning styles, abilities and expectations vary, so do individual learning needs. Learning needs can be assessed formally and informally in teaching situations: the classroom, at the bedside or in the consulting room. Spencer (2003) suggests that teachers can optimize teaching and learning opportunities that arise in daily practice through planning, using appropriate questioning techniques and teaching in different clinical contexts. Clinical teachers also provide support, guidance and supervision for learners in their professional and personal development, appraisal and career advice.

What are we trying to achieve?

The attentive clinical teacher can support professional development in a number of ways, including through providing appropriate feedback (McKimm, 2009). How this is done depends on the extent to which both teacher and student, or trainer and trainee are aware of the learner's strengths and weaknesses. The Johari window (Luft and Ingham, 1955) is a widely-used model that neatly summarizes these states of self-knowledge (*Table 2*).

The window is a two-by-two taxonomy of learning or development needs with the underlying assumption that if gaps or deficiencies are out in the open, then they can be more effectively addressed. The aim is to try to move learning needs into the 'open' quadrant where what needs to be learned is known both to the learner and to the teacher.

Where others can see his/her deficiencies or gaps but the learner cannot, the learner is said to be 'blind'. This is where the use of formative workplace-based assessments and a trusting relationship can help the learner become aware of his/her learning needs. Here, the teacher needs to help the learner learn something

Table 1. The twelve roles of the clinical teacher

Roles that require more educational expertise	Examiner	Planning or participating in formal examinations of students
		Curriculum evaluator
	Planner	Curriculum planner
		Course organizer
	Resource developer	Production of study guides
		Developing resource materials in the form of computer programmes, video or print
Roles that require more content expertise or knowledge	Information provider	Lecturer in classroom setting
		Teacher in practical or clinical setting
	Role model	On-the-job role model
		Role model in the teaching setting
	Facilitator	Mentor, personal adviser or tutor
		Learning facilitator

adapted from Harden and Crosby (2000)

Table 2. The Johari window

	Known to self	Unknown to self
Known to others	Open	Blind
Known to self	Hidden	Unknown

about him-/herself that he/she does not already know.

Where the learner is aware of his/her gaps or deficiencies but others are not, learning needs are said to be 'hidden'. Moving these into the open quadrant requires a high level of trust between the teacher and the learner so that learners feel able to admit weaknesses and deficiencies or reveal fears.

The 'unknown' quadrant represents those learning needs that are neither known to the teacher nor to the learner. This is where both teacher and learner need to work together to identify areas for further exploration. Multisource feedback and formal assessments have a role here in flagging up previously unidentified problem areas.

Another way of looking at these issues is the 'competency model' of professional development (Proctor, 2001; Hill, 2007) (*Table 3*). In this model teachers also help learners move through four stages of development: from unconscious incompetence, where the unskilled learner is also unaware of his/her failings, to unconscious competence, or a state of more intuitive or free-flowing expertise.

When and where to assess?

Identifying and assessing learning needs is part of the experiential learning process (Kolb, 1984). This cycle is similar to the 'plan, do, reflect, review' cycle (*Figure 1*) often used in appraisals.

In practical terms, learning needs should be assessed at a number of points: at the start of a programme, meeting or teaching session, during the course of a programme or session to review progress, and at the end of a session or course of study to plan ongoing learning according to where learners are going next.

Before starting any teaching episode, the teacher needs to establish an understanding of where the learner is, the level he/she has reached, his/her past experience and his/her personal goals. As part of the overall planning process for a teaching session, the teacher will also have defined his/her aims of the session, the learning outcomes or objectives and possibly an assessment. At the start of the session, these should be explained to the learner to set the context for the learning and align the stated, formal learning outcomes with individual learners' educational needs. So how can this be done in busy clinical sessions?

Assessing learning needs can be done relatively informally and briefly at the start of a teaching session, simply by asking the learners what they would like to or what they expect to get out of the teaching session: a quick 'checking in'. Making this a routine part of any teaching session helps to avoid situations where the teacher is gamely plodding on regardless even though the learners are clearly disengaged with the process. During and towards the end of a teaching session, one needs to review how well the learners are achieving their learning goals, where they may have gone off track and what further learning or practice may be required. Keeping an eye on both the tasks that one wants learners to achieve as well as the process of learning will help to ensure that learning needs are met. If we go back to the learning journey, the journey (process) will be very different if you are flying, travelling by car or by boat; if you travel alone or in a group; if you are all setting off from the same place or if you are being led by a guide who is very familiar with where you want to go and has a good route map to hand.

Who assesses?

Assessing learning needs in teaching situations should then be a shared endeavour. Teachers play a key role in helping learners develop critical self-reflection and independence by providing opportunities for self-assessment of their clinical competence, knowledge, understanding and attitudes and by pointing out where there is a mismatch between self perception and observed behaviours. Building in simple questions such as 'how do you think that went...?' opens up opportunities for learners to routinely reflect on and review their performance.

Figure 1. The plan, do, reflect, review cycle.

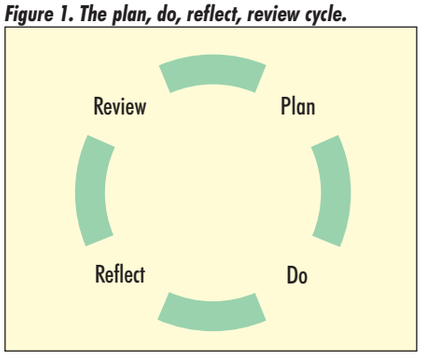

Table 3. Role of clinical teacher in supporting the development of professional competence

	Unconscious incompetence	Conscious incompetence	Conscious competence	Unconscious competence
Learner	Low level of competence. Unaware of failings	Low level of competence. Aware of failings but not having full skills to correct them	Demonstrates competence but skills not fully internalized or integrated. Has to think about activities	Carries out tasks without conscious thought. Skills internalized and routine. Little or no conscious awareness of detailed processes involved in activities
Clinical teacher: Assessing learning or educational needs	Supportively helps learner to recognize weaknesses, identify areas for development and become aware of learning or development needs and thus conscious of 'incompetence'	Uses range of skills and techniques to assess learners' development in relation to defined expectations for the level and stage of learning. Helps learner to develop and refine self-assessment skills. Reassures and supports	Helps learner to develop and refine skills, reinforces good practice and competence through positive regular feedback and a focus on areas for development and refinement of skills, additional knowledge required and integration of competences	Raise awareness of detail and unpack processes for more advanced learning, help learner to identify any areas of weakness or bad habit that he/she may not be aware of

One advantage of teacher assessment of learning needs is that experienced teachers know the programme and expected performance at different stages of practice. Highly competent teachers (Sadler, 1989) are knowledgeable, able to empathize with learners, are reflective about their own and others' skills and want to see learners improve and develop. However, different teachers' skills, experience or expertise can be variable, which is where standardized tools or techniques can help both teachers and learners.

Tools and techniques for assessing educational needs

Formal assessments assess learning at regular points against defined criteria. Well-designed assessments provide information for learners to help them identify where their learning has been effective and where they need to improve. Teachers can also use assessment results as one of the means to measure learners' progress and identify and agree learning needs. This section summarizes some instruments commonly used in clinical teaching and personal and professional development to assess learning or educational needs.

Professional 'conversations'

'Even for established professionals, groups learn together through an often asymmetric co-participation in practice. Clinical practice is littered with tales told in conversations about difficulties and disasters… which can lead to reconsideration of practice, reflection and adaptive learning by the wider audience' (Pitts, 2007).

The professional conversation is being increasingly formalized in medical education, e.g. through case-based discussion, and is used as a stimulus for ongoing professional development. It aligns with reflective practice, enabling both 'reflection in action' and 'reflection on action' (Schön, 1983; Launer, 2002).

By encouraging story-telling, narrative and conversation in a structured way, the teacher can work with the learner to help him/her identify significant elements, learning points and areas for further reflection or development. Care must be taken to avoid the conversation turning into a chat between friends, a paternalistic debate or an opportunity for unfounded criticism. Defining a 'learning contract' (Solomon, 1992) in terms of agreeing outcomes, a structure, prompt questions and timeframe helps to set clear boundaries around the conversation. One specific way of structuring a professional conversation is around a significant or critical incident.

Significant event analysis

'The structured and deliberate review of significant events has been advocated as a useful way to encourage reflection' (Brookfield, 1990).

Significant event analysis can help learners make sense of events that, for one reason or another, evoke an emotional response, cause them to take stock, expose a gap in understanding or capabilities or cause them to think differently. The event need not cause anxiety or distress, it can be positive. This is a useful tool that you might use as a trigger to identify learning needs, or to reflect more deeply about an issue or situation. A common framework is:

- The learner or other member of the team raises an event as significant
- Each learner describes their event in their own way without interruptions (what happened)
- The teacher asks each learner to identify his/her initial thoughts and feelings (how did you feel about it?)
- Then follows an analysis or evaluation of the event (why do you think it happened this way or what do you think was going on?)
- Conclusions and implications for learning and development are drawn (what do you take forward from this? what do you think you've learned from this?)
- The significant event is usually then written up and filed in a learning log or personal development plan.

The key features of successful significant event analysis are that it should be a positive experience for all involved, it should result in some improvement in patient care and it is about development – not blame. Significant event sessions must be handled with sensitivity and care with enough time for debriefing (Henderson et al, 2002).

Formal assessments tools

Learning needs lurking in the blind or unknown quadrants of the Johari window can be surfaced through the use of formal assessment tools. These may be knowledge-based tests such as the multiple choice progress tests used in undergraduate medicine, objective structured assessments of clinical competence or one of the ever-increasing number of workplace-based assessments which have found favour in postgraduate medical education such as the mini-clinical evaluation exercise or direct observation of procedural skills.

Audit

Audit compares actual performance against a set of criteria and standards. It is therefore a powerful tool for learning as it reports the outcomes of what we actually do. Conducting small-scale audits of actual performance is a useful vehicle for identifying areas for future development and is usually a requirement of both undergraduate and postgraduate training programmes.

Personal development plans

These are formal means by which an individual (normally working with a teacher, mentor or supervisor) sets out the goals, strategies and intended outcomes of learning and training. These are typically developed in alignment with professional programmes of study or to meet requirements from regulatory or statutory bodies around continuing professional development and revalidation to retain a licence to practice, stay on a professional register and demonstrate professional standing.

A well-structured plan should clearly define timeframes, activities and outcomes to meet the defined goals and specify dates for review and meetings with teachers, supervisors or line managers. Plans will vary between individuals. Learning activities may include formal and informal training, reading, attending meetings, observing colleagues, practising clinical skills, refreshing or learning new study skills or developing new skills to meet a career goal (Jennings, 2007).

Portfolios

Portfolios pull together 'evidence' and information from a range of sources to demonstrate continuing professional development. Students, trainees and established practitioners are all increasingly required to a learning portfolio. In some medical schools and training programmes portfoli-

os may also form part of the assessment process. Evidence collected is commonly linked together by a reflective diary, commentary or account of development over a specified timeframe enabling the reader to 'make sense' of the portfolio in terms of the individual's professional development and context.

Portfolios may be written or electronic in form and many have formal roles in appraisal and accreditation or review processes. They typically include a personal development plan, appraisal records (including academic appraisals, 360° appraisals, multisource feedback forms from patients, colleagues and others), research papers or other publications, conference papers, critical or significant incident analysis, attendance certificates from training events, clinical meetings, conferences, assessment results from training courses and other evidence requirements.

Conclusions

Assessing the learning needs of students and trainees is an activity that clinical teachers carry out on a day-to-day basis, both formally and informally and in a range of contexts. It is an essential element of effective teaching and supervision and is becoming increasingly more formalized as part of continuing professional development. BJHM

Conflict of interest: Dr Swanwick is the Faculty Development Lead for the London Deanery and Professor McKimm was commissioned by the London Deanery to lead on the development of the suite of e-learning modules from which these articles have been derived.

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KEY POINTS

- Assessing learning needs is a key role of the clinical teacher in supporting learning and professional development.
- Programme learning outcomes, feedback from assessments and individual learning 'wants' all contribute towards defining current learning needs.
- It is important to build in time for assessing learning needs and checking they have been met.
- Assessment of learning needs can be carried out informally through professional conversations.
- Structured tools for assessing learning needs include significant event analysis, formal assessment instruments, audit, professional development plans and portfolios.