Optimising student guidance during internship at the Nuclear Medicine department

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The Dutch education system is based on the bachelor-master model. The bachelor MBRT study (MBRT is an abbreviation for Medical Imaging and Radiotherapy) educates students in radiotherapy and the whole range of medical imaging such as ultrasound, nuclear medicine and radiology, including Computed Tomography (CT) and Magnetic Resonance Imaging (MRI). These medical fields are different and aligned at the same time. The specific way of working in examinations as well as the medical equipment are different. However, patient care is very similar. Also the more general skills like quality assurance, communication, management and evaluating your own learning performance are quite similar for these medical fields. In radiology, ultrasound and nuclear medicine the employee is called Medical Imager. In radiotherapy he is called Radiotherapy expert. The similarity between these medical fields has led to the bachelor MBRT.

Starting from the professional profile, ten competences are defined which meet the general bachelor qualifications and the international Dublin descriptors. The competences and their level are the same for all the MBRT education centers in The Netherlands. The exact way how to reach the competence may be different in the curricula of each MBRT. The ten competences are:

- Patient care
- Acting professionally and methodically
- Safety and prevention
- Organization and management
- Communication and instruction
- Working on and within a policy
- Cooperation
- Research
- Quality assurance and innovation
- Learning and evaluation

A similar approach for the three MBRT’s is the formulation of learning objectives by the student himself on the basis of the ten competences. To reach the competences he can follow theoretical education, practical skills education and career counselling (also called student mentoring program). Career counselling means coaching the student in his learning. To proof his level of competence the student keeps a portfolio. In this portfolio he describes his process of learning and keeps the results of theoretical assessments, skills assessments and results of other ways of learning. In an overall portfolio assessment he proofs a certain level of competence.

An important part of the education is internship. After a period of school education the student will apply in real practice the things he learned in theory and simulation settings. The internship takes place in two out of four medical fields. The four medical fields are defined as radiotherapy, radiology (sometimes combined with ultrasound), ultrasound and nuclear medicine. Internship in radiology is obligatory. The second internship is chosen by the student himself. The transfer of competences for one medical field to the other is done in theory, supported by the idea of similarity and the transfer capacity of a bachelor student.

At the nuclear medicine department the students own learning objectives form the guideline. This means the department of nuclear medicine facilitates his learning. There are central roles for the employees on the floor: the working coach and the internship coach of the department.

The internship coach of the department has an overall responsibility for learning processes. The student creates a special plan for the internship in which he describes his learning objectives for the different competences (what to reach, how to reach it, when to reach it, how to assess it). The student and mentor define the route on the department. Evaluations are planned at certain time intervals.

The working coach is the one who really supports the student in his learning on a daily base. The special plan the student has made is again the guideline. The employee gives feedback on the micro, meso and macro level, which respectively means direct intervention, evaluation at the end of the day and periodic evaluation together with the internship coach. This means either every moment can be an assessment moment or assessments can be
planned. In the Dutch system, the assessment of the internship on the floor is in fact provisional. Formative assessment takes place at the institution, in the portfolio assessments mentioned earlier. Of course, the evaluations of internship are a very important proof of competence.

Because the student himself creates his own learning objectives -instead of a fixed program for all students- good student coaching by the working coach and the internship coach are required. To realize this they are well trained.

The internship coach must enable the student to reflect on his own acting. A famous method for reflection is the ALACT model by Korthagen (2005) and this model is used by MBRT-students. The ALACT model means Action – Looking back on the action – Awareness of essential aspects – Creating alternative methods of action – Trial. The internship coach can help the student in exploring Phase 2, Looking back on the action, asking him different questions. The ALACT model will be further discussed in the Lunch meeting.

References
Van Berkel H, Bax A. Toetsen in het hoger onderwijs 2006; Bohn Staflu van Loghum Houten.