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Work-based assessment: qualitative perspectives of novice nutrition and dietetics educators

Abstract

Background The assessment of competence for health professionals including nutrition and dietetics professionals in work-based settings is challenging. The present study aimed to explore the experiences of educators involved in the assessment of nutrition and dietetics students in the practice setting and to identify barriers and enablers to effective assessment. **Methods** A qualitative research approach using in-depth interviews was employed with a convenience sample of inexperienced dietitian assessors. Interviews explored assessment practices and challenges. Data were analysed using a thematic approach within a phenomenological framework. Twelve relatively inexperienced practice educators were purposefully sampled to take part in the present study. **Results** Three themes emerged from these data. (i) Student learning and thus assessment is hindered by a number of barriers, including workload demands and case-mix. Some workplaces are challenged to provide appropriate learning opportunities and environment. Adequate support for placement educators from the university, managers and their peers and planning are enablers to effective assessment. (ii) The role of the assessor and their relationship with students impacts on competence assessment. (iii) There is a lack of clarity in the tasks and responsibilities of competency-based assessment. **Conclusions** The present study provides perspectives on barriers and enablers to effective assessment. It highlights the importance of reflective practice and feedback in assessment practices that are synonymous with evidence from other disciplines, which can be used to better support a work-based competency assessment of student performance.

Keywords

Dietetics, education, qualitative, student assessment

Disciplines

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Work-based assessment: qualitative perspectives of novice nutrition and dietetics educators

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Abstract

Background: The assessment of competence for health professionals including nutrition and dietetics professionals in work-based settings is challenging. The aim of this study was to explore the experiences of educators involved in the assessment of nutrition and dietetics students in the practice setting and to identify barriers and enablers to effective assessment.

Methodology: A qualitative research approach, using in-depth interviews was employed with a convenience sample of inexperienced dietitian assessors. Interviews explored assessment practices and challenges. Data was analysed using a thematic approach within a phenomenological framework. Twelve relatively inexperienced practice educators were purposefully sampled to take part in this study.

Results: Three themes emerged from these data: (i) Student learning and thus assessment is hindered by a number of barriers including workload demands and case-mix. Some workplaces are challenged to provide appropriate learning opportunities and environment. Adequate support for placement educators from the university, managers and their peers and planning are enablers to effective assessment. (ii) The role of the assessor and their relationship with students impacts on competence assessment. (iii) A lack of clarity in the tasks and responsibilities of competency-based assessment.

Conclusions: This study provides perspectives on barriers and enablers to effective assessment and highlighted the importance of reflective practice and feedback in assessment practices that are synonymous with evidence from other disciplines which can be used to better support work-based competency assessment of student performance.

Introduction

Assessment of the knowledge and practice of entry-level health professionals is complex and requires a range of methods and forms of assessment (Crossley & Jolly, 2012). There is increasing evidence of the importance of assessment in the workplace setting rather than artificial or simulated educational environments (Norcini, 2010). Practice educators, also referred to as clinical supervisors, clinical educators or preceptors, have an important role in supporting work-integrated learning and assessment of student performance in the workplace internationally (Dietitians Improving Education and Training Standards Thematic Network, 2009a). The importance of appropriately skilled practice educators and university staff involved in dietetics student training have been acknowledged as a key standard across Europe (European Federation of Associations of Dietitians, 2010). The experience of practice educators, and the workplace environment, are important for supporting supervision (Kilminster & Jolly, 2000). Practice educators provide feedback so that students can improve their performance and often provide a link between university-based assessment and transition of students from novice to competent practitioner.

Competency standards provide a focus on observable outcomes, are relevant to the workplace, enable delineation of curricula, define readiness for practice and provide a framework for assessment (Jolly, 2012). Professional competence includes the knowledge, skills and professional behaviours linked directly to workplace performance (Ash & Phillips, 2000; Epstein & Hundert, 2002). Work-based assessment in nutrition and dietetics in Australia involves meeting entry-level competency standards where all performance criteria must be demonstrated including learning experiences in clinical, food service and public health nutrition settings (Dietitians Association of Australia, 2009) which is different to standards across Europe (Dietitians Improving Education and Training Standards Thematic Network, 2009a). The assessment of competence in work-based settings by practice educators is influenced by personal experiences and traditions and evaluation of the tools used (Van der Vleuten et al., 1994). In nutrition and dietetics there is variation in the assessment skills of practice educators and no requirement for training in assessment and as such a need to better support these educators in their assessment of students' competence in the work setting (Dietitians Improving Education and Training Standards Thematic Network, 2009b; Lennie & Juwah, 2010).

Assessment is reported as one of the most challenging issues for dietitians training students across different settings (Dietitians Improving Education and Training Standards Thematic Network, 2009b). It has been identified that less experienced or novice assessors in dietetics feel more

challenged by assessment and have more difficulty translating competencies into assessment of practice (Ash, Gallegos, & Hannan-Jones, 2010; Dietitians Association of Australia, 2010). Other evidence suggests there is a positive correlation between the amount of staff training and the capacity to apply assessment tools and through this outcomes can be improved (Lennie & Juwah, 2010). The importance of the “right person” to perform assessment has also been acknowledged as essential for valid and reliable assessment (Crossley & Jolly, 2012). While much research has focussed on measuring the reliability and validity of assessors' ratings on a range of assessment tools, there is a dearth of literature exploring the assessors' experience using these tools and performing assessments, especially in nutrition and dietetics. Understanding the challenges of practice-based assessment for workplace assessors will open up the potential to better prepare health professionals for their role in student assessment.

The aim of this study was to explore the experiences of educators involved in the training and competence-based assessment of nutrition and dietetics students across different practice settings in Australia (individual case management, community/public health nutrition and food service management), in order to identify barriers and enablers to effective assessment. The findings of this research will inform the practice of work-based assessment and may have application to other countries and to other health professions where assessment of student competence is conducted in the workplace.

Methods

A qualitative approach, using in-depth interviews, was used to explore the experience of novice educators (with a maximum of two years supervision experience) in their assessment of students during practical placements across the three domains of nutrition and dietetics practice (individual case management, community/public health nutrition and food service management). The theoretical framework supporting the inquiry was interpretive phenomenology focusing on the lived experience which is used to shape new knowledge or is explained by existing theory (Liamputtong, 2010; Smith, Flowers, & Larkin, 2009).

Data were collected from these educators via individual interviews to allow in-depth exploration of the educators' experiences without others being present who may add bias to responses (Liamputtong, 2010). The interviews were conducted by two authors (CP and EB), both experienced in dietetics education and also in practice-based assessment, who came together to discuss the approach and reviewed recordings of each other's initial interviews to ensure a similar

approach. Interview questions were developed based on a preliminary review of the literature and explored assessment practices and challenges (Table 1). The insider perspective of the research topic and questions allowed for in-depth exploration of the issues and for the interview schedule to be responsive during the process if required (Sikes & Potts, 2008). Ethics approval was obtained from the relevant university human research ethics committees (approval number CF11/3223 – 2011001765) and informed consent was obtained from each interviewee.

Sampling

A **convenient** sample of practice educators, with a maximum of two years supervision experience **were** sent an invitation to participate via the university course leader. The educators were affiliated with three Australian universities accredited to provide dietetics training, one offering a post-graduate Masters degree and two offering undergraduate degrees. These educators may have supervised students from other universities from time to time. This sample of educators with limited experience with education and assessment was selected **deliberately** based on evidence that suggests that those with less experience find assessment challenging. Educators were also selected to represent the range of work-based settings where students undertake practical placements (Ash et al., 2010; Lennie & Juwah, 2010) **whereby educators from each domain of practice (clinical, food service and public health nutrition) were approached. All educators approached to be part of the study accepted the invitation and participated.**

Analysis

Interviews were conducted over the telephone, lasted between 40 to 60 minutes and were transcribed from audio recordings verbatim. The transcripts were analysed using a thematic analysis approach whereby the authors focussed on the experience of the educators. Transcripts were coded where a label was assigned for elements of the text and codes were then grouped into categories. Data were independently analysed using this approach by two authors (CP and AC) who then worked together to discuss the categories and group the categories into themes. Investigator triangulation was employed in the analysis and interpretation of the study data (Liamputtong, 2010) whereby a subset of six interviews (three each) were analysed separately by two other authors (EB and SA) who verified the categories and themes. Again this insider perspective facilitated reflection and interpretation of the meaning of the text (Sikes & Potts, 2008). **Quotes were used to assist in illustrating the findings.**

Results

Data was collected from 12 practice educators all female and all with less than two years' experience in student assessment although years of experience in practice ranged from one to nine years. After 12 interviews, researchers were satisfied that data saturation was achieved so no further interviews were conducted. Participants worked in individual case management (hospital-based) (n=7) or community/public health nutrition (n=4) settings. One educator worked across these two settings as well as in food service. In the work setting most educators had the role of a preceptor or day-to-day supervisor providing opportunities for student learning, including planning learning experiences to meet placement goals and providing formative feedback on student performance in the workplace. Overall competency assessment was not the responsibility of the novice educators but was given to a practice educator with greater experience employed or partially employed by the university (hereafter referred to as a proficient educator). Analysis of the data revealed three key themes and a number of sub-themes related to the experience of assessment (Table 2).

Creating a placement experience that best enables student learning

Novice educators reported that the learning opportunities available to students differ between placement sites according to the services provided by the site and the typical workload of supervising dietitians. Barriers to creating a positive learning environment and to assessment include: (i) workload demands (ii) case-mix (iii) differing expectations. Enablers included (iv) planning and (iv) support.

Workload demands: The novice educators commented that their workloads impacted on students' learning experiences. Their workload demands could limit their capacity to support students, including observing performance and provision of adequate feedback. They explained often feeling pressured for time to provide adequate feedback and to support student learning through observation due to requirements to meet normal workloads.

Case-mix: Educators reported that the complex nature of patients in acute public hospitals limited the opportunities for students to consolidate entry-level skills, while rural or remote placement experiences were compromised by a lack of complex cases and by the time required for travel to distant locations. It was also recognised that, regardless of the site, the available learning experiences might not always have matched students' ability or individual learning goals. Participants described feeling responsible for creating suitable experiences to facilitate competency development. They spoke of careful planning and communication with the university to ensure

learning experiences met students' learning needs. Those from community and public health nutrition and food service management settings described the challenges of selecting appropriate projects for students.

“I think that was probably one of the difficulties with both community and food service, was trying to make sure that the projects that were selected provided opportunities for the students to achieve the competencies that were allocated to that practical”. (Educator 5)

Differing expectations: Participants reported differences between their own expectations and those of academic staff leading to misalignment in assessment of entry-level competence. They identified differences in interpretation of the competencies and misalignment between useful student contributions to the placement site and university objectives for the placement. Participants' remarked that placement site requirements differ from university expectations with regards to the nature of the placement experience. For example what might be useful to a placement site in terms of student output may not align with university objectives for the placement. Participants suggested that competence should be measured with regards to tasks required in the workplace and therefore directly link to employability.

“So doing needs assessment, being able to work through all of those stages, communication, planning, evaluation. ...and then a lot of the generic stuff about interpersonal skills and being able to work in a team....and communicating with stakeholders at all different levels.” (Educator 2)

Planning:

Educators reported important elements of effective student learning experiences in the workplace setting as being adequate student orientation to the workplace, safe and supportive workplace environment, regular feedback, reflective practice and goal setting. Student engagement in the learning process was acknowledged to affect their experience of work-based learning.

“....just planning ahead so just thinking about what would be some little concepts that you'd like to teach if you had 5 or 10 minutes free”. (Educator 12)

Support: According to participants, support for educators was integral to their confidence and skill development in student supervision and assessment. Peers, senior colleagues and university staff were acknowledged as important for supporting inexperienced educators.

“...I feel very, very well supported from the university and from my specific team. I actually feel very, very lucky and feel that I’ve managed to develop my competence and develop my skills reasonably well in only a couple of placements because of all of that support.” (Educator 6)

A communication loop between the university, students and educators, including the proficient-educator and the novice-practice educator, was identified by participants as important to creating an optimal work-based learning environment for students.

The role of the assessor and their relationship with students

Assessor qualities: Participants reported drawing upon their own experience as a student, their career to date, and their own teaching and learning style to inform their methods and style of working with students. Familiarity with the university, such as when educators worked with students from the university that they attended, reportedly improved [their](#) confidence. Educators described important attributes of an effective assessor as having empathy for the student’s position, sound interpersonal skills and the ability to make the student feel as though they [were](#) an equal.

“..it's not that long since I was a student...I know how I felt.” (Educator 1)

Participants acknowledged that expectations of student performance and competence between educators can differ. Some identified that they might be harder judges because of a tendency to use their own student experiences and competency requirements as a benchmark. Others felt that they had a better understanding of entry-level practice, and therefore more realistic expectations, as they were closer in age and/or level of experience to the students. Despite these perceived differences, participants generally reported consistency between their assessments of students and those of more experienced colleagues.

Participants acknowledged that they had taken on the role of an educator with limited training. Some participants indicated that further training in assessment would be welcome. They explained that skill development among assessors is reportedly largely fostered by peers and with support

from the university. Participants also reported relying on feedback from students to evaluate their performance in the role.

“I definitely feel confident... I’ve got enough feedback from my students to know that they have a really positive experience here and they learn a lot during their placement. But I guess it would definitely be nice to know that the more formal assessment side of the placement, that I was doing that really well. Some more formal training about that would be really good.” (Educator 8)

Student variables: Participants found it useful to acknowledge students’ existing capabilities and to have an understanding of the students’ goals for the placement. The use of documentation (self-assessment) prior to placement to articulate progression to date was cited as a particularly useful tool for assessors to learn about students before placements begin.

Participants described that it is ‘easy’ to support and assess ‘good’ students and more challenging when it comes to students who **were borderline or** lacked insight into their own ability or who were not receptive to feedback. **They also** reported difficulty **in** supporting pairs or groups of students where the perceived level of ability between students differed. Students from non-English speaking backgrounds were also reported to be more **challenging** to assess.

“One of the main challenges ... was probably the fact that they were from a non-English speaking background... it was difficult to.... identify whether it was a language barrier or a knowledge deficit with certain components.” (Educator 3)

Clarity in interpretation of assessment tools and role of a novice educator in assessment

Assessment in the workplace: According to **these novice** educators, key issues around competency based assessment in the workplace included differences between daily supervision and final assessment, definitions and common interpretations of the performance criteria to be assessed and a need for student participation in their assessment.

They defined assessment as ticking performance criteria and making a final determination as to whether a student passes or fails. They saw this to be separate from providing supervision and feedback to students.

Assessment of competence was seen to be challenging, requiring a degree of **subjective** judgement. **Participants** acknowledged the importance of making a judgement based on multiple performances and having the right person to undertake assessment and generally this was seen to be the proficient educator or a more experienced practitioner. Many participants expressed a willingness to be more involved in assessment but not to the point of having ultimate responsibility for whether a student passes or fails.

“I think it’s hard when there is only one person who will occasionally be observing to do that definitive assessment I think it’s difficult to get a complete, holistic view of how that student’s going. Although [we] do give feedback to the person who does that final assessment, ... one example doesn’t always necessarily represent where that student’s at.” (Educator 3)

Similarly participants raised concern over cases where the university made the final judgement on competence at the conclusion of a placement. This concern was attributed to the university’s lack of involvement throughout the placement experience. The different assessment systems for food service and community and public health nutrition required different mechanisms for assessment. The participants acknowledged the project outcomes and report demonstrating some knowledge and skills but not being able to assess professionalism attributes, such as communication, negotiation and leadership skills in the workplace.

“...a lot of the assessment of their placement subjects is through their written project proposal and final report which some students are really good at doing that write-up but they might not be very confident and assertive when actually putting what they’ve said in the report into practice. The reports don’t necessarily reflect their competency....” (Educator 8)

Participants reported the need to differentiate between competencies to be demonstrated and assessed in the placements and those that have already been assessed in the university environment. Participants recommended that in order to best prepare students for the workforce, graduate competencies should align with position descriptions for entry-level roles. Participants expressed the need for a more specific illustration of entry-level competence with respect to various settings and contexts and called for definitions of what constitutes a fail, borderline and pass student.

Type of assessment: Participants acknowledged variations in the preferences for and interpretation of tools used to assess competence. It was evident that the assessors have different preferences for assessment tools and that no one tool will meet everyone's needs. Some explained that tick boxes were confusing, and may not be accurate in picking up incompetence but are useful to track progress. Opportunities to record qualitative comments were suggested by some participants as being more useful for individual patient encounters. Participants expressed that forms were not particularly useful in assessing professional attributes and behaviours, for example, time management, and teamwork. Educators requested greater consistency [in what was required by each university, including forms and assessment tools](#) to make it easier to [assess](#) students from [different universities](#). A portfolio style of assessment, where students collate a range of evidence against entry-level competencies was seen to be [useful to demonstrate achievement of competence](#). The student-led and owned nature of the portfolio and its ability to facilitate reflective practice and self-evaluation was seen to be particularly beneficial for supporting and documenting student progress. Participants stressed the importance of student-led development of competence whereby students identify their own goals for placement and strive towards competence based on their own goals.

Discussion

This qualitative investigation [aimed to explore the experiences of educators involved in competence-based assessment in order to identify barriers and enablers to effective assessment](#). It identified a number of factors perceived to be important in work-based learning and assessment in nutrition and dietetics and provides unique insight into novice educators' experiences of competence-based assessment to inform and improve assessment of student competence in the workplace. The role of the work-based setting is pivotal to competence development, and assessment in this setting facilitates student development (Holmboe, Sherbino, Long, Swing, & Frank, 2010). The increasing number of health professional students and the need to provide quality work-based training opportunities means that the role of novice educators in assessment needs to be [widely](#) acknowledged and [better](#) supported.

This study highlighted [barriers to](#) effective work-based assessment, including lack of time and capacity (educators and patients) [and differing expectations between work-based setting and universities](#). [Regular](#) communication between universities and placement sites appeared to strengthen interpretation of the competencies and [was seen by](#) educators [as an enabler to work-based assessment](#). There is a need [for further](#) work towards a shared understanding of entry-level competence, performance based assessment and expectations of universities and placement

providers and their respective roles in developing competence. The importance of standards for work-based learning experiences have been acknowledged internationally (European Federation of Associations of Dietitians, 2010).

The discourse among educators in this study around the 'best' methods for assessment is congruent with the literature that describes a lack of faith in a 'tick box' approach to assessing the complexity of professional practice (Crossley & Jolly, 2012) and the influences on variation to assessment in the workplace (Kogan, Conforti, Bernabeo, Iobst, & Holmboe, 2011). Educators stressed the need for a holistic approach to assessment that considers various aspects of student performance. This was particularly true for food service management and public health nutrition assessment where educators reported feeling more comfortable assessing professional skills in the workplace rather than competencies demonstrated in other forms of assessment such as project reports. The importance of a rounded view of performance to determine competence is acknowledged. Competency assessment is highly dependent upon workplace experience and culture (Ash, Dowding, & Phillips, 2011). The literature further supports this notion that assessment in the workplace requires overall judgment or an assessment *system* rather than focusing on individual tasks or observations (Crossley & Jolly, 2012; Norcini et al., 2011). Highlighting the relationship between the competency standards, competency assessment and work-based learning and assessment is paramount for the profession to advance in relation to assessment practices. Setting standards of knowledge and performance to be achieved before commencement on placement is also recommended (Dietitians Improving Education and Training Standards Thematic Network, 2009b).

The research found that novice educators involved in student assessment recognise the importance of creating placement experiences that support learning which is increasingly challenging with pressures on work-based placement experiences. It identified that the relationship between novice educator and student impacts competency development and assessment. Educators indicated that identifying with students from their own recent experience and showing empathy were important in creating a good relationship and making the placement experience a positive one for the student. The qualities of effective supervisors are well described (Kilminster & Jolly, 2000; Siggins Miller Consultants, 2012). The importance of educators being able to provide effective feedback as well as managing the learning experience, are an enabler to appropriate assessment (Holmboe et al., 2010; Norcini et al., 2011; Siggins Miller Consultants, 2012). In Australia new competency standards for

clinical educators have articulated a role for all levels of educators to be involved in assessment of students (Human Capital Alliance, 2012).

Educators in this study highlighted the significant role of goal setting, facilitated through reflective practice, to drive the student learning experience. Reflective practice can be effective if encouraged by appropriate supervision in an authentic context in a supportive learning environment and can be effectively assessed (Mann, Gordon, & MacLeod, 2009). Student self-assessment is an element of reflective practice and an important step in understanding the performance criteria and being able to advocate for their ability to an assessor. The role of a portfolio as evidence of competence in the profession (Brennan & Lennie, 2010; Volders, Tweedie, & Anderson, 2010) together with the educators positive views of this tool as a mechanism for assessment warrants further consideration. Placing the student at the centre of feedback and providing ongoing opportunities to improve practice based on feedback is essential for assessment and learning (Boud & Molloy, 2013; Sadler, 2013). This finding further highlights the need for training of educators to be able to support self-directed learning and assessment (Dietitians Improving Education and Training Standards Thematic Network, 2009b) (Human Capital Alliance, 2012).

In this research, novice educators felt strongly about being involved in assessment of student competence, especially because of their day-to-day involvement with students and this is a potential enabler to effective assessment. According to the literature, reliable ratings of student competence are provided by assessors who themselves demonstrate competence to judge performance and who have had opportunities to observe student performance (Crossley & Jolly, 2012). Our findings, together with the literature highlight an opportunity to collaborate on professional development for less experienced educators in the area of work-based assessment (European Federation of Associations of Dietitians, 2010). Acknowledging the factors influencing variability of assessment by judges, such as reference points, assumptions, making numerical ratings, context and student response to feedback (Kogan et al., 2011) are an important way forward in involving novice educators in assessment.

The limitations of this study are acknowledged. More experienced educators may not highlight the same issues. While the study is constrained by the small, convenient sample, the sound theoretical framework and triangulation of data analysis provides rigor and evidence of insight into the movement towards assessment as a system.

In conclusion, this study identified barriers and enablers to assessment in the workplace, provided insight to the assessment experiences of novice educators and showed the good will and aptitude among novice educators despite limited direction in their role. To improve the assessment system in nutrition and dietetics further, support for the development of less experienced assessors, multiple methods of performance and competence assessment and high quality feedback where students are central to the assessment process are required.

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Removed for blind review.

Table 1: Interview questions and inquiry logic.

Question	Phenomenology logic
<p>Experience and work role</p> <p><i>Prompts: How long have you worked in nutrition and dietetics and in what capacity? How long have you been involved with student assessment in this area?</i></p> <p><i>Have you had any training in competence assessment? If yes, please describe.</i></p>	<p>Understanding level of experience and influences on perspectives</p>
<p>Experience of assessment across individual case management, community and public health nutrition and food service management.</p> <p><i>Prompts: strengths, areas for improvement</i></p>	<p>Experience of assessment in key work-based assessment domains required for entry-level practice in Australia</p>
<p>Key challenges to competence assessment in workplaces.</p> <p><i>Prompts: Capacity/barriers to overcome challenges.</i></p>	<p>Experience of challenges in work-based assessment</p>
<p>Key elements for robust nutrition and dietetics competence assessment.</p>	<p>Experience of best practice work-based assessment</p>
<p>Exposed to any innovative or different assessment approaches, any other profession</p> <p><i>Prompts: different university, overseas, other profession</i></p>	<p>Experience of work-based assessment practice innovation</p>
<p>Design of an ideal assessment tool.</p>	<p>Experience of competency assessment tool.</p> <p>Elements of an effective assessment system.</p>

Table 2: Themes and subthemes derived from the analysis of assessor interviews.

Theme	Sub-Themes	Descriptors
Creating a placement experience that best enables student learning	<i>Barriers</i>	
	(i) Workload demand	Typical workloads can lead to pressure for time and can limit the capacity to support, observe and give feedback to students.
	(ii) case-mix	Selecting suitable experiences to match learning needs
	(iii) differing expectations	Expectations of academic/university staff differ to practice educators
	<i>Enablers</i>	
	(iv) planning	Educators need for support from their managers and the university Learning opportunities differ (public hospitals have complex patients compared with community/rural setting which has requirement for travel) Adequate orientation, supportive and safe environment and regular feedback
	(v) support	Student engagement in learning in the workplace Support from workplace and university
The role of the assessor and their relationship with students	(i) Assessor qualities	Own experiences and style Empathy, interpersonal skills Differing expectations/standards Support to assess
	(ii) Student variables	Knowledge of goals/focus to placement Challenging students/students from NESB
Clarity in interpretation of assessment tools and role of a novice educator in assessment	(i) Assessment in the workplace	Competence assessment separate to supervision Assessment based on judgment Right person to assess Illustration of entry-level competence
	(ii) Types of assessment	Different tools, prefer qualitative approaches Assessment of professionalism Student-led

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