

Supplementary 3. Types of boundary objects for learning and assessment and function and use in school and practice

Note: when variation around the use of boundary objects was found (between schools, study years, wards, tracks), this is marked in italics

	Boundary object	Function and use in school	Function and use in practice
Standards and formats that can be used during patient care	Formats for clinical reasoning	<ul style="list-style-type: none"> Teachers offer training and case-based practice around the formats and provide them to students 	<ul style="list-style-type: none"> Students can apply formats to guide learning and working in clinical practice when required. <i>Sometimes clinical educators adapt or extend formats for students to make them more applicable</i>
	Formats for communication		
	Formats/ handouts for preparing patient care, writing nursing plans, taking a patient history		
Theory resources	Textbooks, PowerPoints, movie clips etc. about nursing theory	<ul style="list-style-type: none"> School teachers provide resources during classes so students can apply theory to clinical practice 	<ul style="list-style-type: none"> Students can consult materials in clinical practice and discuss them with supervisors
Competency (self-assessment) rubrics	Self-assessment forms	<ul style="list-style-type: none"> Schools offer self-assessment rubrics and provide students information about these Schools offer information, handouts etc. to practice settings about their assessment criteria Schools provide rules about when and how to fill in self-assessments Schools provide assessment standards including norms per study year and determine pass/fail rules School teachers make assessment decisions together with practice representatives 	<ul style="list-style-type: none"> Students prepare their self-assessments based on 'evidence' of their clinical competencies Students send their self-assessments to supervisors, clinical educators and school teachers Supervisors and clinical educators fill in assessment forms Supervisors and clinical educators make assessment decisions together with school teachers <i>Clinical educators sometimes make posters, handouts, to make competency criteria more understandable, or provide opportunities in which can collaboratively work on applying competencies to patient care on the ward</i>
	Assessment forms		

Skill assessment forms		<ul style="list-style-type: none"> • <i>In some education tracks, the school requires students to have specific skills assessed</i> 	<ul style="list-style-type: none"> • <i>In some education tracks, supervisors/clinical educators fill in skill assessment forms</i> • <i>On some wards, clinical educators develop additional skill assessment forms</i>
Personal development plan formats	Format in which students describe how they are going to achieve the required competencies, at the beginning of each placement	<ul style="list-style-type: none"> • School teachers provide formats and give instruction about these • Schools set rules and deadlines around development plan formats • <i>Schools give feedback and/or grade development plans (in some tracks)</i> 	<ul style="list-style-type: none"> • Students discuss plans with supervisors/ clinical educators • Students use learning goals from their plans at the beginning of the shifts • Students evaluate goals from their development plan in assessment meetings • <i>Some clinical educators create visual spaces (e.g. White boards) in which students' learning goals become visible for all ward staff</i>
Feedback formats	Formats to collect daily, weekly monthly feedback	<ul style="list-style-type: none"> • Schools provide feedback formats and set rough guidelines about how often to collect feedback and how to use this feedback for (self) assessment 	<ul style="list-style-type: none"> • Student writes self-evaluation after the shift • Student collects written feedback with the formats and writes self-evaluations in the formats • Students use feedback as evidence for their competency achievement • Supervisors and clinical educators use feedback forms to keep track of development • <i>Practice educators sometimes set additional guidelines for the frequency of feedback forms</i>
Practice assignments	Assignments or projects for students to elaborate on clinical cases, make quality improvement plans, analyze nursing care using Evidence Based Practice etc.	<ul style="list-style-type: none"> • Schools provide training and give instructions about assignments • School teachers grade assignments 	<ul style="list-style-type: none"> • Students discuss with supervisors/clinical educators how they can apply assignments to practice • Supervisors/ clinical educators provide feedback on assignments • <i>Students sometimes present outcomes in</i>

			<i>ward meetings</i>
Reflection formats	Formats for stepwise reflection	<ul style="list-style-type: none"> Schools provide training about reflection and offer formats for written reflection <i>Schools (in some educational tracks) require students to include written reflections to demonstrate competency achievement</i> 	<ul style="list-style-type: none"> Students discuss clinical situations to reflect on with supervisors/ clinical educators Students receive feedback on written reflections
Clinical placement guidelines	Guidelines in which expectations concerning the use of these boundary objects for learning and assessment are described	<ul style="list-style-type: none"> Schools provide general guidelines about the use of boundary objects in clinical practice including the rationale behind them 	<ul style="list-style-type: none"> Clinical educators provide additional guidelines about how to use and apply these formats to the particular setting