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## Assessing student-centred learning without a written exam? A discussion on student-centred learning and continuous examination

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### Abstract

This contribution reports on the outcome of a workshop at KUL 2025 where a group of cross-disciplinary teachers explored continuous assessment as a means to enhance student-centred learning (SCL) in the courses. The participants were interested in student-centred learning as a means for course development and to align their courses with Chalmers' educational goals, such as constructive alignment and participatory design. During the workshop, the participants reflected on their own experiences and shared ideas on accessible learning activities. Some of the learning activities were milestone papers, authentic/performance tasks, oral explanations and mechanisms supporting engagement and self-regulation. The autonomy and independent learning in SCL have their challenges, for example, transferable skills and Generative AI. An unbalanced workload, if there is a lack of participation or institutional support, results in the students' development of autonomy and independent learning being missing, with consequences for self-regulation skills. Generative AI is another challenge and at the same time an opportunity, which calls for increased visibility and transparent tool use.

### Sammandrag

Bidraget redovisar utfallet av en workshop på KUL2025 där en tvärvetenskaplig lärargrupp utforslade kontinuerlig bedömning som ett verktyg för att öka det studentcentrerade lärandet i kurserna och för kursutveckling och för att bättre möta Chalmers utbildningsmål t.ex. constructive alignment och deltagardesign. I workshopen reflekterade deltagarna själva och i grupp genom att dela med sig av idéer för bedömningsbara lärandeaktiviteter, t.ex. skriftliga avstämningar, verklighetsnära uppgifter muntliga förklaringar. Lärande aktivisterna var också mekanismer för att uppmuntra engagemang och öka självinsikten om sitt lärande. Självständigt och oberoende lärande i student centrerat lärande har sina utmaningar t.ex. överförbara färdigheter och Chat GPT. En obalanserad arbetsbelastning och om det saknas deltagande eller

stöd från lärarorganisationen kan utvecklingen av självständigt och oberoende lärande saknas kan det ha konsekvenser för utvecklingen av överförbara färdigheter. Chat GTP är en utmaning på ont och gott och uppmanar till ökad transparens och synlighet i användningen av verktyget.

## 1. Introduction

In the traditional classroom, the role of teachers was authoritative, and the students were passive attendants. Student-centred learning shifts the classroom power relations (Wright 2011). In an SCL classroom, the teacher's role shifts to be facilitating and the students to be responsible agents in their own learning (Wright 2011). In higher education, the interest in student-centred learning (SCL) is slowly increasing (Biggs and Tang, 2011; Felder and Brent, 2016), which requires teachers to rethink roles, assessment practices, and learning design in the transition to be able to empower students to develop ownership of their learning. The structure of instruction, e.g. meaningful tasks and activities intended to create learning (Black and Wiliam 2009), requires feedback followed by purposeful assessment to contribute to complex disciplinary outcomes and to transferable skills such as metacognition, self-regulation, and collaborative competence (Boud and Falchikov, 2007; Nicol and Macfarlane-Dick, 2006).

Traditional summative assessment, such as written examinations, is useful in certain problem-solving tasks such as closed problems where the goal and method are clear (Godfrey et.al, 2014). Open problems with unclear goals and methods can be difficult to capture in written exams. The openness creates complexity, which requires complex learning such as critical thinking, the application of knowledge in real-world contexts (Biggs and Tang, 2011; Boud and Falchikov, 2007). Open and complex problems often benefit from a formative assessment where the learning outcomes are included in learning activities and continuously collected material provided by the students during a course (Black and Wiliam, 2009; Wiliam, 2011). Properly designed tasks provide feedback on the students' learning, such as low-stakes quizzes, individual and group assignments, peer reviews, reflective writing, and project-based work (Hernandez-de-Menendez et al., 2019; Black & Wiliam, 2009; Nicol & Macfarlane-Dick, 2006; Felder & Brent, 2016). The assessment provides educators with actionable information to foster self-regulation and metacognitive awareness (Dochy et al., 1999).

Useful in the design are tools such as Constructive alignment (CA) and its cousin, outcomes-based education (OBE) that specifies intended learning outcomes (ILOs) (Spady, 1994;

Harden, 2007), facilitates learner agency and participation (Lea et al. 2003; O'Neill & McMahon, 2005) and assessment strategies of achievement (Black & Wiliam, 1998; Sadler, 1989). In its formative use, continuous assessment is intended to close the gap between students' current performance and the intended outcomes through cycles of feedback and revision (Sadler, 1989; Black & Wiliam, 2009).

## 2. Method

The workshop at KUL 2025 was designed as a collaborative, cross-disciplinary workshop where participants could explore both learning activities and appropriate assessments. To inspire, the master's courses *Environmental Management* (VMI036) and *Stakeholder Management for sustainable development* (ENM130) were used as examples of redesigned traditional courses with summative assessment. The design of the continuous assessment in both courses was informed by research on active learning and aligned assessments (Felder & Brent, 2016; Biggs & Tang, 2011), and included elements such as quizzes, peer-to-peer feedback, group assignments and project work.

The participants were invited to outline a redesigned or new student-centred learning activity by outlining the design and continuous assessment elements, such as assignments, peer interaction, or checks for understanding. The active learning method and participatory instructional design (Könings et al., 2014) were structured using the "1-2-4-All" technique to scaffold divergent and convergent thinking. Participants first engaged in individual reflection (5-10minutes) on three prompts: (i) needs in their courses; (ii) which learning activities could/should be student-centred; (iii) what knowledge and skills were targeted in their intended learning outcomes. The individual reflections were followed by pair discussions to surface overlaps, then small group "beehives" to map alignment between outcomes, activities, and assessment tools. Finally, a plenary synthesis to share designs, constraints, and next steps.

Guiding questions were: RQ1, how can continuous assessment be designed to elicit valid evidence of complex outcomes in SCL courses? RQ2, in what ways does continuous assessment support students' engagement, self-regulation, and learning? RQ3, what affordances and constraints do educators identify when adopting continuous assessment?

The data sources comprised (a) facilitator field notes from pair, beehive, and plenary discussions, and (b) group summary sheets. The data was analysed with qualitative analysis and organised as summaries for each research question. For RQ1, we recorded whether activities showed clear outcome–task–evidence alignment and any authenticity features. How

the participant developed and addressed design features eliciting valid evidence of a complex outcome. RQ2 noted mechanisms that supported engagement and self-regulation (e.g., goal/criteria clarity, feedback timing, self/peer assessment opportunities and revision). In RQ3, the perceived advice and limitations by the instructors are examined. The use of tallied simple frequencies (e.g., number of activities showing alignment) and selected illustrative excerpts was used in the evaluation of the data for accuracy and completeness.

### **3. Results**

The participants recognised the potential for continuous assessment both as a learning process and as an assessment mechanism. Activities such as quizzes, discussions, reflective writing, group projects, and peer review were already used in various forms by the participants, but were rarely used as assessment instruments. To better support critical thinking, collaboration, and knowledge application, the participants considered formalising and aligning the activities with course learning outcomes. During the workshop, the participants identified existing practices, unmet needs, and alignment opportunities between learning outcomes and assessment strategies. Key findings by course are summarised below.

#### *Course 1 – Integration of Active and Reflective Practices*

Participants teaching Course 1 wanted to refine how group work translated into deeper learning, including peer accountability and with a stronger connection to the project's course objectives. Student-centred strategies were described at individual, group, and in-class levels. In-class sessions included interactive discussions, mini-exercises, and so-called “puzzlers”, short problem-solving prompts designed to stimulate critical thinking and immediate engagement. The students engaged individually with preparatory readings and completed exercises, occasionally using a flipped-classroom format. In supporting self-reflective activities, the participants used low-stakes quizzes. Collaborative activities, e.g. research, reporting, and presentations, were deliberate efforts to increase student ownership of real-world applications.

#### *Course 2 – Emphasis on Engagement and Thematic Understanding*

Participants teaching Course 2 expressed a need for enhanced discussion, deeper student engagement, and more continuous assessment activities. Existing practices partially addressed these goals, but additional structures were considered necessary to help students process key readings and consolidate their understanding of core themes. Participants proposed recurring exercises and scaffolding of group tasks to strengthen students' responsibility for their learning.

Suggested adjustments included weekly discussion prompts, peer-explained summaries, and group assignments with increasing complexity, subject to continuous assessment.

### *Course 3 – Mixed Modalities and Foundational Learning*

The participants identified the potential to increase students' ownership of learning through additional active-learning elements. Proposed activities included short writing tasks, peer assessments, and reflective components following quizzes, with digital tools to personalise feedback and enhance formative learning opportunities. The course combined lectures with in-class, basic, closed problem-solving exercises in pairs. Mini-projects in a seminar setting offered application of concepts and peer-learning opportunities. Online quizzes were used to provide feedback and monitor understanding.

### *Course 4 – Focus on Independent Work and Final Integration*

The assessment in course 4 relied more on summative than formative approaches, centred on individual assignments and a final project. The new design included extending existing project work into a continuous assessment process with embedded checkpoints (e.g., milestone submissions, peer reviews, and progress reflections). Learning logs, oral presentations, and peer commentary during project development could be used in the formative feedback to reduce the focus of the final report product.

## **4. Discussion**

A common thread across the discussions was the importance of feedback as a key feature of effective continuous assessment, both from peers and instructors. Consistent with prior work, timely and specific formative feedback helps students regulate their learning and deepen their understanding of course content (Nicol and Macfarlane-Dick 2006). The workshop revealed a keen interest among educators in student-centred learning and continuous assessment as means to support engagement, thinking skills, knowledge development, collaboration, and problem-solving. Participants identified instructional strategies that aligned student-centred learning activities with collaborative research and reflection.

Participants (RQ1) consistently pointed to designs that made the outcome–task–evidence relationship explicit and auditable. In line with the student-centred framing, participants also emphasised the development of transferable skills (e.g., metacognitive monitoring, self-regulation, collaboration, and accountable participation), which are frequently cited outcomes of feedback-rich designs (Nicol and Macfarlane-Dick 2006). However, there was a shared view that more explicit integration of these activities within assessment frameworks was needed to

ensure constructive alignment and to strengthen the evidential basis for complex outcomes (Biggs & Tang, 2011; Wiggins, 1998).

Concerning RQ2, these accounts indicated that continuous assessment supported students' engagement and learning by cultivating skills, recurring feedback opportunities, reflection, and revision. Activities such as in-class discussions, peer-reviewed assignments, and progress tracking in project work reflect recommendations to embed assessment within the learning process (Felder and Brent, 2016). These approaches encourage students to take ownership of learning, build metacognitive awareness, and develop collaborative skills, which were outcomes increasingly emphasised in contemporary higher education (Boud and Falchikov, 2007). Taken together, these patterns offer a direct answer to RQ2, that continuous assessment supports engagement and self-regulation by orchestrating feedback–revision cycles that make learning processes visible and improvable.

Yet, practical challenges were reported, for example, time constraints, inconsistent student participation, and the need for institutional support when implementing alternative assessment practices, anticipating RQ3 on advice and constraints. Consistent with the literature, participants viewed continuous assessment not merely as a grading mechanism, but as a pedagogical approach that supported learning through regular feedback, iterative development, and formative check-ins (Black & Wiliam, 2009; Nicol & Macfarlane-Dick, 2006).

Course-specific reflections reinforced the interpretation and illustrated answers to RQ1 and RQ2. Reflections from Course 1 underscored the value of active learning through in-class problem-solving and group research. To translate learning activities into meaningful assessment opportunities in line with constructive alignment (Biggs and Tang's 2011), ensuring a clear match between intended learning outcomes, tasks, and assessment (evidence) can be a challenge. In course 2, the need for stronger support mechanisms to help students engage with complex readings and key themes suggests that recurring exercises and discussion-based learning can guide learning behaviour over time (Gibbs and Simpson 2004). For Course 3, incorporating problem seminars and online quizzes was perceived as a pathway toward more active and formative learning; proposed peer-based and reflective elements align with designs shown to foster student agency (Dochy et al., 1999). In Course 4, assessment was primarily summative, centred on individual assignments and a final project. There was a need to break assessment into smaller, scaffolded components resonating with the formative principle of helping students closing the gap between current performance and intended learning outcomes through cycles of feedback and revision (Sadler, 1989).



In RQ3, participants also raised generative AI as both an opportunity and a challenge for continuous assessment. Because short written products, summaries, and early drafts can be AI-assisted, concerns focused on the visibility of authorship, the displacement of learners' cognitive effort, and equity in tool access and disclosure, issues widely noted in higher-education discussions (Zawacki-Richter et al., 2019; Kasneci et al., 2023). The trajectory highlighted in the workshop, toward process-anchored assessment (iterative checkpoints, feedback-to-revision cycles, and occasional in-class/explain-your-work moments), was well aligned with institutional guidance prioritising process over product. The pragmatic response to make the learning processes visible, was to reduce the reliance on single artefacts vulnerable to AI support, by sustaining validity for complex outcomes (Biggs and Tang, 2011). At the same time, AI foregrounds design tensions for continuous assessment (e.g., workload, monitoring outside class, transparency of tool use), clarifying both the constraints to be managed and the affordances to be leveraged (RQ3).

Adapted to the realities of AI-enabled study practices (Boud & Falchikov, 2007; Nicol & Macfarlane-Dick, 2006; Kasneci et al., 2023), suggests that continuous assessment, when deliberately aligned with outcomes and supported by feedback-rich routines, can create complex learning and transferable skills (metacognition, self-regulation, collaboration).

## 5. Conclusion

In this contribution, continuous assessment has been explored as a meaningful alternative to traditional written examinations in student-centred learning environments. The workshop's multidisciplinary group of educators converged on aligning assessment strategies with active and reflective learning processes. Substituting or supplementing summative exams with continuous assessment makes outcomes more visible, achievable (a sequence of alignment, feedback-oriented tasks), deepens learning, and strengthens student autonomy and self-regulation. In particular, open-ended, real and authentic problems can constructively be aligned to intended outcomes (Sadler, 1989; Nicol & Macfarlane-Dick, 2006; Biggs & Tang, 2011).

Active learning and continuous examination carry challenges, including workload concerns, institutional constraints, and varying levels of student readiness for self-directed learning. In an AI-enabled learning environment, many tasks in the continuous assessment (short writes, summaries, early drafts) can be AI-assisted. To sustain validity, authenticity and transparency in the assessment, processes need to be accompanied with documented revision histories, brief explain-your-work moments, and transparent AI-use expectations. As continuous assessment becomes more embedded in educational practice, faculty development efforts should focus on



strategies for sustainable implementation, effective feedback design, and learning outcome alignment in the disciplinary contexts. Assessment is not separated from learning; it is integrated. Through intentional design and reflective practice, continuous assessment can transform both teaching and learning, moving higher education closer to the goals of inclusivity, relevance, and lifelong learning.

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