Meaningful mapping of remediation in longitudinal and developmental assessment models

Sylvia Heeneman1 | Suzanne Schut2

1Department of Pathology, Faculty of Health, Medicine and Life Sciences, School of Health Professions Education, Maastricht University, Maastricht, the Netherlands
2Department of Educational Development and Research, Faculty of Health, Medicine and Life Sciences, School of Health Professions Education, Maastricht University, Maastricht, the Netherlands

Correspondence: Department of Pathology, Maastricht University Medical Center+, Peter Debyelaan 25, 6229 HX Maastricht, the Netherlands. Email: s.heeneman@maastrichtuniversity.nl

Comprehensive assessment practices have the potential to stimulate and shape learning. In this issue, St-Onge et al1 explore the current evidence pertaining to the implementation of developmental progress assessment (DPA), which is defined as assessments mapped on developmental pathways and is used to provide guidance to trainees and faculty members. In doing so, they offer important insights on longitudinal and developmental pathways and the role of assessment therein.

... developmental progress assessment (DPA), which is defined as assessments mapped on developmental pathways and is used to provide guidance to trainees and faculty members

In DPA, the mapping of assessments to pathways is focused on the learner's progression and has the potential to facilitate the development of competence in ways that could promote students' empowerment.1 At the same time, St-Onge et al1 present the identification of trainees in need of remediation as one of the positive outcomes of the implementation of DPA. This juxtaposition of student empowerment with programme-required remediation creates an interesting quandary. What is the role of remediation when assessments are intended to be mapped on developmental pathways that encourage students taking more control over their progression?

This juxtaposition of student empowerment with programme-required remediation creates an interesting quandary

The concept of remediation in medical education is widely debated. In a thematic review, Cleland et al2 concluded that most remediation interventions focus on improving performance to pass a resit of an assessment instead of emphasising the development of learning. In addition, the analysis showed that what worked in remediation practices (let alone why) could not be delineated yet. In traditional assessment settings, resits are often pre-scheduled, and mandatory. If DPA follows a predetermined pathway with mapped assessments, remedial assessments could become traditional resits. This may require trainees' pathways to be stalled until they have passed the next mapped assessment, which seems contrary to the objectives of developmental pathways as presented by St-Onge et al.1 Developmental progress assessment models explicate expectations and provide a roadmap for each training stage to guide individual learners' development towards independent practice. So how can remediation be meaningfully integrated as part of longitudinal and developmental assessment models?

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited and is not used for commercial purposes.

© 2020 The Authors. Medical Education published by Association for the Study of Medical Education and John Wiley & Sons Ltd

866 | wileyonlinelibrary.com/journal/medu Medical Education. 2020;54:866–875.
... remedial action can be integrated as part of a personalised pathway in DPA, helping the learner maintain a certain ownership ...

Ellaway et al\textsuperscript{3} offer an interesting model, ‘situated remediation,’ that offers greater compatibility with assessment models focused on progression and development. In situated remediation, two intertwined systems are presented, one with a focus on success and completion, the other with a focus on failure and exclusion; remediation is considered to be a bridge or interface between the two systems. In the success system, students could perform below standard, but the teaching and assessment activities are planned or mapped to enable the learner to meet the expected level of performance. Ellaway et al\textsuperscript{3} define this a ‘remedial action’ that is supportive, informal and short-term. In contrast to failure-focused assessment, this model ensures that remedial action can be integrated as part of a personalised pathway in DPA, helping the learner maintain a certain ownership (ie, enabling the learner to map remedial activity as part of his or her developmental pathway with a focus on progression).

When diagnostic information from a DPA identifies a learner in need of remediation who cannot be expected or assumed capable of leading such him or herself,\textsuperscript{1} the model of Ellaway et al\textsuperscript{3} moves the learner to the remediation zone, where specific goals are defined along with a timeline for completion and mapped primarily by staff rather than the learner. The key distinction relative to some other models is that Ellaway et al\textsuperscript{3} clearly propose structured remediation as part of medical education systems, not as afterthoughts or an ‘outsider’ activity. This fits with the purpose of DPA by virtue of allowing a clear developmental map to be created for assessment that identifies pathways able to provide guidance to trainees.\textsuperscript{1} The existence of a failure subsystem, in which the learner is suspended or required to retake a component of the programme or, if unsuccessful, may be excluded, fits the purpose of integrating and mapping remediation activity as part of longitudinal and developmental assessment models that take idiosyncratic needs into account, rather than a standalone that forces a single strategy on every trainee who struggles.

Identification and support of learners in need of remediation using assessments meaningfully mapped on longitudinal and developmental pathways resonates with the principles and models for systems of assessment.\textsuperscript{4,5} In a system of assessment, each assessment point or feedback opportunity is meaningful and optimised for learning. The need to work on certain improvement points (eg, a lack of certain knowledge and skills or the need for feedback on professional competencies) is based on the diagnostic information that should be generated by DPA, after a process of reflection or self-assessment by the learner, and thereby becomes personalised. Doing so requires that the curriculum and the mapping of assessments in the model of DPA must have sufficient flexibility to provide ownership for the learner to facilitate planning of remedial actions that will help them improve.

... integrating and mapping remediation activity as part of longitudinal and developmental assessment models that take idiosyncratic needs into account ...

One example that illustrates this principle is progress testing - a comprehensive test tailored to the learning objectives learners should achieve by the end of the curriculum that is typically administered several times per year.\textsuperscript{6,7} Deliberately mapping progress tests to achieve a longitudinal and developmental assessment model can allow students to actively use feedback generated by sequential tests to determine how their overall progress is taking place. Students have indicated that by using and reflecting on progress test feedback, they can actively work on certain improvement points and remediate during the normal curriculum, suggesting that students can map their learning, undertaking remedial action and navigating in a longitudinal and developmental way, without being stalled on their developmental path.\textsuperscript{8}

The curriculum and the mapping of assessments in the model of DPA must have sufficient flexibility to provide ownership for the learner to facilitate planning of remedial actions that will help them improve.
The scoping review by St-Onge et al.\textsuperscript{1} was valuable to call attention to the mapping and personalisation of DPA, stimulating many thoughts on what remediation entails and how it can be meaningfully integrated in longitudinal and developmental assessment models. These insights can be considered as important stepping stones for the further development of longitudinal and developmental assessment models.

**ORCID**

Sylvia Heeneman \(\text{https://orcid.org/0000-0002-6103-8075}\)

Suzanne Schut \(\text{https://orcid.org/0000-0002-8298-399X}\)

**REFERENCES**

1. St-Onge C, Lachiver ÉV, Langevin S, Boileau E, Bernier F, Thomas A. Lessons from the implementation of developmental progress assessment: a scoping review. Med Educ. 2020;54(10):878-887.

2. Cleland J, Leggett H, Sanders J, Costa MJ, Patel R, Moffat M. The remediation challenge: theoretical and methodological insights from a systematic review. Med Educ. 2013;47(3):242-251.

3. Ellaway RH, Chou CL, Kalet AL. Situating remediation: accommodating success and failure in medical education systems. Acad Med. 2018;93(3):391-398.

4. Norcini J, Anderson MB, Bollela V, et al. 2018 Consensus framework for good assessment. Med Teach. 2018;40(11):1102-1109.

5. van der Vleuten CPM, Schuwirth LWT, Driessen EW, Govaerts MJ, Heeneman S. Twelve tips for programmatic assessment. Med Teach. 2015;37(7):641-646.

6. Van der Vleuten CMP, Verwijnen GM, Wijnen WHFW. Fifteen years of experience with progress testing in a problem-based learning curriculum. Med Teach. 1996;18(2):103-109.

7. Freeman A, van der Vleuten C, Nouns ZM, Ricketts C. Progress testing internationally. Med Teach. 2010;32(6):451-455.

8. Heeneman S, Schut S, Donkers J, van der Vleuten C, Muijtjens A. Embedding of the progress test in an assessment program designed according to the principles of programmatic assessment. Med Teach. 2017;39(1):44-52.

DOI: 10.1111/medu.14262

**Change of practice? Change of research position?**

Jane Ege Møller \(\text{https://orcid.org/0000-0002-6103-8075}\) | Mette Krogh Christensen

Centre for Health Sciences Education, Aarhus University, INCUBA Skejby, Aarhus, Denmark

**Correspondence:** Jane Ege Møller, Centre for Health Sciences Education, Aarhus University, INCUBA Skejby, Palle Juul-Jensens Boulevard 82, Building B, 8200 Aarhus Nord, Denmark.

Email: jane@cesu.au.dk

Complexity in health care work is increasing as new interconnections between stakeholders in health care systems emerge. As the conditions for health care education undergo rapid changes, questions arise as to how clinicians can recognise and act upon these complexities, and how medical education researchers can develop frameworks that effectively capture such complexity.

In this issue, Ajjawi et al.\textsuperscript{1} offer the use of video-reflexive ethnography (VRE) as a possible solution to both of these issues. In their words: “Video-reflexive ethnographers seek to make visible and intervene in the complexity of everyday workplace interactions. The method is not about making the complex simple or easy or offering singular solutions, but it is about seeing and making meaning about practice in some of its complexity.”\textsuperscript{1} In other words, VRE aims to change and improve workplace learning practices, as well as to lead to research that captures this complexity.

We appreciate the potential of VRE and agree that the use of video as a basis for group sharing and reflection is valuable in medical education. However, the article\textsuperscript{1} also raises questions about challenges inherent to the VRE approach, to which the authors devote less attention. In the following, we reflect on how changes in practice can actually occur, and the position the researcher can occupy. We hope that this will lead to clarification and refinement of the use of VRE and other collaborative approaches in medical education research.

The potential for change of practice has been described as a cornerstone in VRE.\textsuperscript{1} A guiding principle in this process is reflexivity. In VRE, participants and researchers take part in reflexivity sessions that engender ‘a shared, social deliberation about existing circumstances and practices such that these are apprehended from new perspectives and in new ways,’ which may empower clinicians to change their practices. This description characterises reflexivity sessions as representing a kind of ‘black box’ phenomenon whereby video itself is thought to have the power to enable participants to see new sides of otherwise hidden aspects of their practice. However, might it be that one is merely seeing ‘surface’ issues as well as still reproducing norms and values that could or should be questioned?

... might it be that one is merely seeing ‘surface’ issues as well as still reproducing