Assessment in the virtual learning environment

Dr Isabel Mark
ST5 General Adult Registrar, SWLSTG Trust
Honorary Clinical Lecturer at SGUL

@IzzieMark  @AUTP2  #RCPsychIC
Content

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2) Assessment in a virtual world and impact of Covid-19
3) Assessment options and innovations:
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4) Key messages
Acknowledgements

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1) Assessment core aims and considerations

- The primary aim of assessment should be *for* learning
- Assessment utility is a careful balance between five elements:
  - **Reliability**: producing consistent results?
  - **Validity**: measuring what we want to measure?
  - **Educational Impact**: influencing student learning?
  - **Cost**: cost effective?
  - **Acceptability**: appropriate, feasible, effective?

Gibbs and Simpson 2005, Van der Vleuten 1996, Schuwirth and Van der Vleuten 2004
How might these be compromised when considering virtual assessments?

- In-person assessments cannot simply be transferred online.
- Validity - threatened if online tasks are not authentic, not diverse or not supported.
- Reliability - jeopardised if assessors not adequately monitored due to not being present physically, or students not receiving regular reliable feedback.
- Cost of some online applications.
- Student motivation and engagement may be challenged.

Gikandi et al 2011
2) ‘Assessment in a virtual world’

**PROS**
- Wide range of design options
- Convenience for some
- Flexibility
- Allows for social distancing
- Automatic data analysis and tracking
- A chance to rethink assessment quality and educational impact?

**CONS**
- Students less supported
- More tempted to cheat or collude with others
- Diversity challenges
- Technology availability
- Data storage and protection issues
- Loss of authenticity?
Suggested considerations for online assessment, adapted from QAA 2020 / Cantillon 2004

Practicalities and underlying assessment principles:
• Re-examine assessment design consider authenticity and focus on unique case studies and scenarios,
  Professional body requirements (validity). Open or closed book?
• Location of assessment (in student homes or test centres).
• Social distance requirements, Cost limitations

Technology issues:
• Students’ means to access the assessment (required location of internet servers, hardware/software, network back-up, understanding of logistical issues such as start/stop times, log-in passwords)
• Approach for emergency technical issues, Data storage and protection issues, International students’ ability to access the assessment

Security: Assessor and invigilator issues:
• Marking protocols - do they need review? Can technology be optimised to allow accurate automated marking?
• Guards against academic misconduct: invigilation, online declaration
• Feedback: how to offer timely and effective feedback to students

Student support factors:
• Student technical training and support options, including for those in different time zones
• Flexibility in timescales for students to complete assessments
• Reasonable adjustments to promote equality, diversity and inclusivity for students
• A form of effective communication from institutions to students, regarding all proposed changes
Changes within Psychiatry (due to Covid-19):

- Undergraduates: Medical student psychiatry examinations were either cancelled or required extensive transformation.

- Postgraduates/psychiatric trainees:
  - Two diets (sittings) of each part of the examination rescheduled online.
  - Finding a digital provider involved extensive piloting and preparatory work:
    - *Pearson Vue* were chosen to deliver Papers A and B.
    - *Fry IT* delivered the CASC examination.
## Options for online assessment within psychiatry

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<thead>
<tr>
<th>What is being assessed?</th>
<th>Type of assessment?</th>
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<tr>
<td><strong>KNOWLEDGE</strong> (curriculum dependent, likely related to list of disorders students need to have knowledge of)</td>
<td>SUMMATIVE</td>
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| • Written MCQs/SBAs | • Feedback from peers/ expert patients  
| • Project presentations | • Asynchronous quizzes  
| | • Synchronous quizzes  
| | • Situational judgement tests  
| | • Gaming scores |
| **SKILLS** (including history taking, mental state examination, risk assessment, communication skills) | • Simulated OSCEs  
| | • Online logs/ work-place based assessment | • Case presentations  
| | | • Case-based discussions  
| | | • Observed simulated clinics/formative OSCEs  
| | | • Feedback from peers/ expert patients  
| | | • Active observation of videos  
| | | • Situational judgement tests  
| | | • VR activity/simulation |
3a) Summative options
(formal evaluation tool for a ‘grade’)

- Multiple choice questions (MCQs)/Short answer questions (SAQs)
- Objective structure clinical examinations (OSCEs)
- E-portfolios (Online logs, work-based assessments)
- Project presentations
Summative options:
Recent examples of inspiring practice

- Written examinations: RCPsych Examinations, individual University approaches
- Virtual OSCEs for nurse practitioners via Attend Anywhere (Prettyman et al 2018).
- Online ‘Log-books’ increasingly used within education (Alrefaie et al 2020).
- Project presentations: open-invite seminars via Microsoft Teams (Imperial College)
3b) Formative options

(informal and to support the learning process)

- Case presentations
- Case-based discussions group assessments
- Observed simulated clinics/formative OSCEs
- Active observation of videos
- Asynchronous quizzes
- Synchronous quizzes
- Situational judgement tests
- Gaming scores
- Virtual reality (VR) activity
- Receiving feedback from expert patients and peers
Formative options: Recent examples of inspiring practice (1)

- **Virtual cases**: Southampton Medical School developed a free online resource which incorporates videos into virtual cases with MCQs posed as the case develops alongside some short answer responses (Virtual cases, 2020)

- **i-SPOT**: Students responded to video clips via a webcam, could then view/ change their responses, compare them to expert responses and see common mistakes. After submission: student received feedback from the lecturer other students (Open University of the Netherlands) (JISC 2020 Future of Assessment)
Formative options:
Recent examples of inspiring practice (2)

- **Psy-Q**: Free, mobile-compatible, web-based question bank in which students and educators can submit their own questions for revision purposes (Torous et al 2020)

- **SOLViT**: University College London ran an 11-week programme of ‘pub quiz’ style sessions for medical students called Student-led Online Virtual Team-based learning (SOLViT) (Casalotti, 2020)

- **Gameplay** in psychiatry education, varied between MCQs and simulated scenarios (Mosalanejad et al 2020)
  - Gamification elements included using avatars, battles, gifts, leaderboards, teams and virtual goods.
  - Topics include psychiatric disorders, drug options and psychosocial therapies.
Other options for student feedback

- Expert-patients
- Student buddy groups
- Wider peer networks:
  - WebPA
  - Buddycheck - similar to WebPA
  - PeerWise (New Zealand)
  - Pitch2Peer (Dutch)
  - Peergrade (Danish)
4) Key messages / Top tips

- A rapidly emerging field with so much potential
- Many sources of inspiration that can be replicated; many resources can be utilised
- We must still ensure that:
  - Assessment quality standards should be maintained
  - We always consider how assessment can be useful for learning
  - Quality of feedback remains paramount
  - Collaboration between educators and institutions is crucial
References


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