Video Recording Tool for Undergraduate Assessment and Learning – the Learning component (VIRTUAL-L)

Soh Lip Min

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This study was supported by the Teaching Enhancement Grant (TEG) awarded by the National University of Singapore.
It is becoming more challenging to balance the educational needs of medical students with the clinical demands on physicians.

Viewing the recordings of one’s own performance may aid learning and is useful for learning physical examination techniques.
Aim

• Evaluate the effectiveness of self-assessment and tutor feedback using videography on improving abdominal examination technique of 2\textsuperscript{nd} year medical students

• If successful, may help to reduce burden on clinician manpower for teaching
Methods

- Response to advertisement (n=46)
  - Self-assessment, SA (n=15)
    - SP practice session 20 min
    - Self-assessment using video Web-link
    - Assessment Videos graded by tutors
  - Tutor feedback, FB (n=15)
    - SP practice session 20 min
    - Videos with Tutor feedback Web-link
    - Assessment Videos graded by tutors
  - Control, C (n=16)
    - SP practice session 20 min
    - No Video & no feedback
    - Assessment Videos graded by tutors

Day 4-5
Day 11-12
Day 28
20 minute practice session with the patient which was video-recorded with consent.
A standardised grading template was used to provide **objective** feedback.

<table>
<thead>
<tr>
<th>Key points</th>
<th>Performed competently</th>
<th>Performed but NOT fully competent</th>
<th>Not Performed or incompetent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A Communication &amp; Rapport</strong></td>
<td></td>
<td></td>
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<tr>
<td>(1) Introduces him/herself</td>
<td>1</td>
<td>0.5</td>
<td>0</td>
</tr>
<tr>
<td>Explains what he/she is going to do</td>
<td></td>
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<td></td>
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<tr>
<td><strong>B Listening Skills / Empathy</strong></td>
<td></td>
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<td>(2) Asks about pain over the abdomen prior to beginning examination</td>
<td>1</td>
<td>0.5</td>
<td>0</td>
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<td><strong>C Examination Skills</strong></td>
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<tr>
<td>(3) Washes hand (soap/alcohol rub)</td>
<td>1</td>
<td>0.5</td>
<td>0</td>
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<tr>
<td>(4) Exposes patient adequately &amp; positions patient appropriately. Inspects from foot end squatting down by the side and during slow deep breathing</td>
<td>1</td>
<td>0.5</td>
<td>0</td>
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<tr>
<td>(5) Superficial palpation in 9 quadrants</td>
<td>1</td>
<td>0.5</td>
<td>0</td>
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Tutors were able to provide **subjective** assessments for the FB students

**Global Rating:**

<table>
<thead>
<tr>
<th>Pass</th>
<th>Fail</th>
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*For Official Use Only*

**Comments:**

<table>
<thead>
<tr>
<th>Good points</th>
<th></th>
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<table>
<thead>
<tr>
<th>Areas to note</th>
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<table>
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<tr>
<th>Overall</th>
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Results: Students in the tutor feedback received the highest mean score with a trend towards significance.

Strong agreement between the scores given by the examiners: intra-class correlation coefficient 0.749
The practice session with the **standardised patient** helped me to learn more effectively (97.8%)
The opportunity to **view the video** of my examination technique helped me to learn more effectively (**75.8%**)
Comments and **feedback from the tutor** helped me to learn more effectively (93%)
I would like the opportunity to view the video of my examination technique (72.4%)
I would like to **receive comments and feedback from the tutor (96%)**
Conclusions

• 96% of students would recommend a similar program to their peers were it to be available.

• Videography with tutor feedback may serve as a useful adjunct in teaching physical examination techniques and is acceptable among medical students.

• Strong inter-examiner score agreement also suggests that this method of assessment is reliable and consistent.
Conclusions

• Self-assessment had minimal impact on improvement
  – Students at this stage may not possess enough knowledge for self-critique

• Further evaluation is necessary
  – Users: Is self-assessment more suitable amongst more senior medical students?
  – Content: Is this approach effective in other aspects of medical education such as history-taking and communications skills
  – Assessors: Balancing faculty acceptability and paradigm change with an increased logistical need
Limitations

• Small sample size which affected the statistical power in analysis
  – Initial aim was to recruit 66 Phase II medical students
  – Many students were keen to participate
  – Several logistical limitations preventing their enrolment
    • Only had a 2 week window period where they did not have a planned curriculum to complete the 3 study visits.
    • Many were also engaged in conflicting activities such as the student Awards Ceremony or Overseas Community Involvement Project, and hence had to withdraw from the study.
References

• Hammoud M. Is video review of patient encounters an effective tool for medical student learning? A review of the literature. Advances in Medical Education and Practice 2012;3 19–30

• Stein N. Feedback on video recorded consultations in medical teaching: why students loathe and love it – a focus-group based qualitative study. BMC Medical Education 2005;5:28

• Paul S. Video recording feedback: a feasible and effective approach to teaching history-taking and physical examination skills in undergraduate paediatric medicine. Medical Education 1998;32:332-336