Appendix B. Data collection form used to record participants’ performance on the simulator.

A low cost, 3D-printed model for bronchoscopy training

- Data collection form -

Study subject # ________________________________
Attempt # ________________________________

1. Able to identify and enter all segments on the right:
   a. RUL
   b. RML
   c. RLL
2. Able to identify and enter all segments on the left:
   a. LUL
   b. LLL
3. Able to enter RUL, RML, RLL and LUL, LLL on request:
   a. Unsatisfactory
   b. Needs improvement
   c. Satisfactory
4. Time to perform tasks on point 3:
   a. RUL ____ seconds
   b. RML ____ seconds
   c. RLL ____ seconds
   d. LUL ____ seconds
   e. LLL ____ seconds
5. Able to keep scope centered and to avoid excessive trauma:
   a. Unsatisfactory
   b. Needs improvement
   c. Satisfactory
6. Able to maintain a good posture, hands position, equipment handling:
   a. Unsatisfactory
   b. Needs improvement
   c. Satisfactory

* RUL, Right Upper Lobe; RML, Right Middle Lobe; RLL, Right Lower Lobe; LUL, Left Upper Lobe; LLL, Left Lower Lobe
Rating instructions:

<table>
<thead>
<tr>
<th>Performance parameter</th>
<th>Un satisfactory</th>
<th>Needs improvement</th>
<th>Satisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Items 1-3, 5 (each with 0-4 points) Identification of anatomy (items #1-3)</td>
<td>No or little knowledge</td>
<td>Identified at least 50% of landmarks</td>
<td>Identified all landmarks</td>
</tr>
<tr>
<td>Scope manipulation (#4)</td>
<td>Frequently pointing away from lumen; more than 5 episodes of trauma</td>
<td>Scope centered for most part; rare (&lt;5) episodes of trauma</td>
<td>Scope always centered; no episodes of trauma</td>
</tr>
<tr>
<td>Item 6 Posture, hand positions and equipment handling</td>
<td>Repeated attempts; clumsy; uncertain</td>
<td>Able to position oneself and use instrument although awkward at times</td>
<td>Comfortable, able to adjust hand position and posture, able to use instrument</td>
</tr>
</tbody>
</table>

**GRADES**

<table>
<thead>
<tr>
<th>Item</th>
<th>Un satisfactory (0)</th>
<th>Needs improvement (2)</th>
<th>Satisfactory (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
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<tr>
<td>2</td>
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<tr>
<td>TOTAL</td>
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</tbody>
</table>

**TOTAL SCORE** ____________