A case study

Enhancing Surgical Education using Video Playback

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Date: Friday Sept 27, 2019
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Je n’ai aucune affiliation (financière ou autre) avec une entreprise pharmaceutique, un fabricant d’appareils médicaux ou un cabinet de communication.
Feedback in PGSE

Iobst et al., 2010; Jenson et al., 2012; Liberman et al., 2005
Video Playback
Purpose

To explore residents’ and supervising surgeons’ feedback experience, including the perception of utility, effectiveness of the feedback process, and the nature and focus of feedback when using video playback.
Methods: Case Study

6 Laparoscopic cases
3 residents
5 supervising surgeons

Intraop recording
- Audio
- Video

Postop Video Playback session
- Audio

Semi-structured interviews

Deductive Analysis
Hermeneutic Analysis
General Inductive Analysis

Culminative Analysis

(Case study) Yin, 2003
Results: Intraoperative Communication

Deductive codes (literature)

• Instrumental (Didactic/Corrective/Two-way)
• Pure teaching (Didactic/Corrective/Two-way)
• Instrumental + Teaching (Didactic/Corrective/Two-way)
• Banter
• Non-specific praise
• Narrative Stories
• Competing Educational Commitments

Ahmed et al., 2013, Roberts et al., 2012, Hu et al., 2012
Intraop – Deductive Analysis

- Instrumental/Didactic: 48%
- Instrumental/Corrective: 11%
- Instrumental/Two-way: 9%
- Pure Teaching/Didactic: 6%
- Instrumental/Corrective: 3%
- I+T/Didactic: 11%
- Non-Specific Praise: 9%
- Banter: 1%
- CECs: 2%
- All Other: 1%

8
Video Playback – Deductive Analysis

- Pure Teaching/Corrective
- I+T/Didactic
- I+T/Corrective
- Instrumental/Two-way
- Instrumental/Corrective
- CECs
- Pure Teaching/Didactic
- All Other
- Non-Specific Praise
- Banter
Results: Hermeneutic Analysis of Video Playback Sessions

Comfortable Discussion
Professional Improvement
Enrichment of Teaching Points
Guiding (and Telling) by the Supervisor
Visual Cues Prompting Reflection
## Results: Interviews

<table>
<thead>
<tr>
<th></th>
<th>Round 1</th>
<th>Round 2</th>
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<tbody>
<tr>
<td>Resident</td>
<td>9 themes</td>
<td>8 themes</td>
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<tr>
<td>Supervising Surgeon</td>
<td>7 themes</td>
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</tbody>
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If you’re really interested, we can go through all of the themes afterwards...
Results: Highlighting Interview Themes

Resident Themes

- **Recognizing layers of learning**

“When I reviewed the video I notice there were times I could have been a better judge of that.” (Resident 1)

“I self-identify it, which is kind of...it’s almost more meaningful.” (Resident 3)
Results: Highlighting Interview Themes

Resident Themes

- **Correction through critical visual review**

“*I totally see what I should have done, and I’ll probably never do it again, and I mean you don’t want to have to make mistakes to do that, but it really allowed me to see that more and understand it more.*” (Resident 2)

“I’m criticizing my own technique, my own decision making, it’s different... You watch an expert video to get an idea of what to do, you watch yourself to get an idea of what to improve.” (Resident 3)
Results: Highlighting Interview Themes

Resident Themes

- Provided another opportunity, outside the OR, to revisit and clarify teaching points, which was helpful moving forward

“...the reinforcement during the video is very different, like, I feel like I more retain(ed) the feedback, so I think it’s a nice way to facilitate feedback from the OR perspective which I don’t think we really do effectively right now” (Resident 3)
Results: Highlighting Interview Themes

Resident Themes

- **In the OR the residents are too focused on the surgical steps to remember teaching points**

“I’m surprised by how much I forgot... the next day I did another LAVH and they were both just blurred together, and you kind of forget what you did next, and what lessons you learned, so it was a good reminder of that. And then when I saw it again I was like ‘oh ya, I remember learning that’, but I had totally forgotten about it.” (Resident 3)
Results: Highlighting Interview Themes

Supervising Surgeon Themes

- More is noticed during video playback

“I think I did catch some small errors, nothing super big, but you know things I didn’t necessarily think to fix or comment on at the time of the OR, but that I was able to identify when I was focused more on just reviewing just specifically what was going on.” (Supervising surgeon E)
Results: Highlighting Interview Themes

Supervising Surgeon Themes

- **More is noticed during video playback**

  “I think it was good to look at what she was doing as well as what I was doing, so for my own self, I even caught myself doing some sloppy camera work, which was interesting, and if I was watching a resident do that I would have corrected it, but it was me.” (Supervising surgeon E)
Results: Highlighting Interview Themes

Supervising Surgeon Themes

- The video allows residents to see the specific things they need to improve

“I got a sense that it was more obvious to her during the replay that it had been the first time around.” (Supervising surgeon C)

“Seeing a problem, you can sort of make an, reinforce an immediate solution, where as in real time you don’t have time to go back again.” (Supervising surgeon C)
Culminating Analysis

Hermeneutic and General Inductive Analysis

Emerging Themes

Broader Themes to answer enabling questions

BIG IDEAS
Conclusions: Big Ideas

The environment in which video playback occurred contributed positively to the feedback experience.

Feedback using video playback is a dialogic critical visual review of the performance.
Critical review of the study

Strengths
- Case study methodology
- Employment of multiple data sources – triangulation
- Member checking

Limitations
- Limitation to laparoscopic cases
- Limitation to single discipline, single center
- Potential impact of Hawthorn Effect

Yin, 2003; Onwuegbuzie & Leech, 2007
Future Directions

• Practically – perceived as valuable tool, IMPLEMENT
• Academically
  > Explore nature, focus, experience in groups
  > Explore same procedure over stages of residency (qual and quant)
  > Use in CPD (academic and community)
  > Open cases and other disciplines
References


References


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