Feedback

Overview:

- 3 Different types of feedback in ultrasound performance that fit with the three distinct phases of skill acquisition learning
- How to establish a good culture around feedback
- Discuss and practice specific feedback model for examination performance feedback
- Structure for film review/critique and assessment

3 reasons for feedback

- Motivate
- Reinforce good performance and discourage poor performance
- Speed up skill acquisition and performance

2 types of feedback

- Intrinsic feedback – learners own built in mechanisms let them assess how they have performed. They can see the results and sense how they have performed
- Augmented feedback – an observer gives detailed feedback about performance that the individual may not appreciate for themselves and about how they can improve

Role of coach

- If we change the outlook of our view of feedback giving to that as role of a coach then potentially the dynamics change so that
    - Our students expect feedback in order to improve much like athletes do
    - We are less intimidated by the prospect of having to give "feedback"
    - It becomes more routine and therefore more practiced and effective

Changes from a potentially stressful situation to a mutually rewarding situation where tutor and student see improvements in performance

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3 stages of learning and proposed feedback techniques

Cognitive phase	Learner is figuring out the skills, movements are slow inconsistent and efficient and there is a lot of cognitive demand while the movements are controlled in a very conscious way, learner is not yet aware of what he/she knows and does not know so may not recognise mistakes	**Error correction**	Error correction is intensive feedback on the micro level as the skill is being learnt. Error correction is vital so that the correct neural pathways for proper skill performance are laid down, it is also important for the learner to safely experience how to correct when things go wrong, always leave the learner with correct skill impression. Limit verbal cues as cognitive demand is high
Associative phase	Things are getting better and students are refining the skill, they can diversify their response and perform the skill in different situations, they can start to detect errors on their own	**Structured formative assessments: Pendleton's model**	Feedback on performance of an entire examination is possible as the student is able to recognise some of their own mistakes and offer a view on their performance. Different structured models for feedback encourage positive and anticipated feedback conversations. Ask for permission to give feedback to ensure learner is receptive.
Autonomous phase	At this stage the skill is well learned and is becoming automatic There are fewer errors at this stage and the learner can concentrate on the finer details	**Film review**	Feedback in the autonomous phase can safely be given after skill performance as corrections at this stage are usually less significant and related to higher level skills. A structured method for critiquing films is discussed

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Principles of good feedback - BOOST

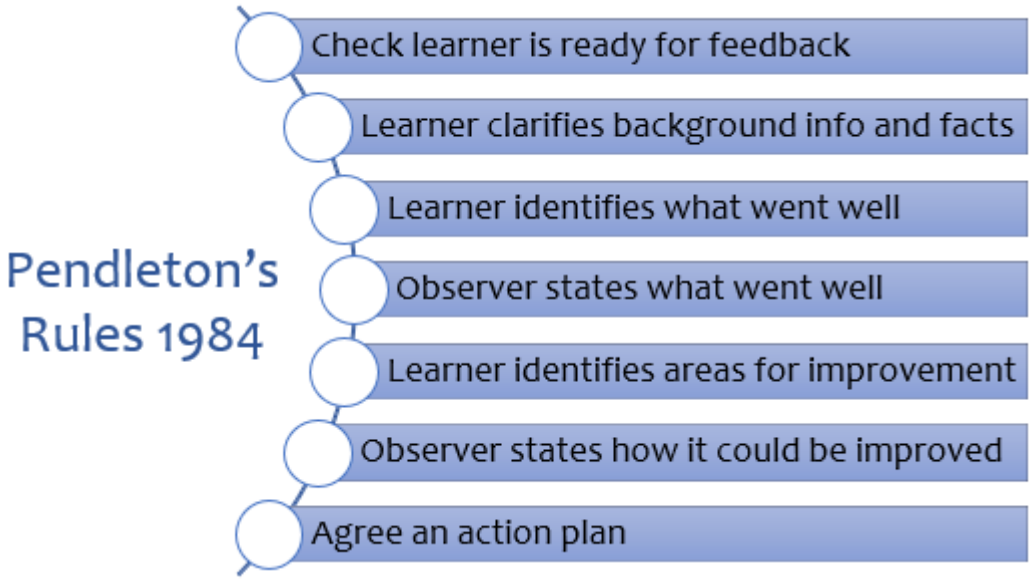
Balanced – talks about strengths and weaknesses

Observed - feedback should be about performance that is observed firsthand rather than what someone else has seen or heard

Objective – should be behavioural and not based on personality traits

Specific – should include specific examples and details for improvement

Timely – immediate (if appropriate) and regular



Film review

What defines a successful ultrasound examination?

- Is the correct test being performed?
- Are the images diagnostic?
- Is the interpretation of the images accurate?
- Has the patient been appropriately managed?
- Has the examination been recorded accurately?

Visual Exemplar

- Provides a standard for performance and a benchmark against which the student can judge their own performance
- Clearly outlines the standard of expectation for what pictures are required to accurately document the examination
- Provides clarity
- Helps to establish good documentation habits

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Method for image critique

1. Assess data across top of image
    a. Patient details entered
    b. Operator details entered
    c. Correct probe choice
    d. Correct preset
2. Assess data down the right side of image
    a. What frequency is in use
    b. Are there any extra parameters on or off that shouldn't be e.g. harmonics in lung imaging
3. Assess the image
    a. Frequency – is there penetration to the back of the field of view
    b. Depth – is the depth set to illustrate the required anatomy and its relationship to surrounding structures
    c. Focus – is the focal zone set at the correctly
    d. Gain – is there even grey tones set correctly across the entire image
4. Measurement technique
    a. Check the accuracy of any measurements and the measurement technique employed
5. Assess the examination as a whole
    a. Has the examination led to the correct conclusion?
    b. Is there sufficient images to tell the correct story?
    c. Do the images represent the true story?
    d. Are the images labelled appropriately?
    e. Has the examination been recorded in the patient's notes accurately?

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