SHORT BIOGRAPHY

• VETERINARIAN BY TRAINING
• SPECIALIST TRAINING PATHOLOGY AT FACULTY OF VETERINARY MEDICINE, UTRECHT UNIVERSITY (FVMU)
• TEACHER UNIVERSITY OF APPLIED ANIMAL SCIENCES AT DEN BOSCH
• SALES MANAGER PHARMACEUTICAL INDUSTRY (JOHNSON & JOHNSON)
• PhD IN VETERINARY EDUCATION AT FVMU
• ASSISTANT PROFESSOR ‘QUALITY IMPROVEMENT VETERINARY EDUCATION’ AT FVMU
• FULL PROFESSOR ‘EVIDENCE BASED EDUCATION’ AT ACADEMIC MEDICAL CENTRE, UNIVERSITY OF AMSTERDAM (AMC-UvA) – December 1, 2011


A model for programmatic assessment fit for purpose


Teaching at the University of Veterinary Medicine, The Netherlands, has always been a challenge. This model is built on a set of assessment principles that are interpreted from empirical research. It specifies cycles of testing, assessment, and learning support activities that are complemented by interventions and elements of evaluation on aggregated assessment data points. A key principle is that individual data points are measured for learning and feedback values, whereas high-stakes decisions are based on the aggregation of many data points. Expert judgment plays an important role in the programme. The model is the result of exemplary learning, and is fed into strategic management with the inevitable simplicity of this type of judgement. This model is further sought in procedural assessment strategies.

Abstract

We propose a model for programmatic assessment in action, which simultaneously optimizes assessment for learning and assessment for decision making about future progress. The model is based on a set of assessment principles that are interpreted from empirical research. It specifies cycles of testing, assessment, and learning support activities that are complemented by interventions and evaluation on aggregated assessment data points. A key principle is that individual data points are measured for learning and feedback values, whereas high-stakes decisions are based on the aggregation of many data points. Expert judgment plays an important role in the programme. The model is the result of exemplary learning, and is fed into strategic management with the inevitable complexity of this type of judgement. This model is further sought in procedural assessment strategies.

Van der Vleuten et al., 2012
**LEARNING TASK**: PATIENT CONSULT, REMOVING A LUMP

**Time**

**Training Activities**

**Assessment Activities**

**Supporting Activities**

**INDIVIDUAL MEASUREMENT (ONE DATA POINT)**
- Maximally fit for purpose
- Every level of Miller's pyramid possible
- Learning oriented, information rich, meaningful (both qualitative and quantitative)
- Low stake

**CERTIFICATE OF ELIGIBILITY**
- Making X-ray and interpretation
- Insertion tracheal tube

**INDIVIDUAL MEASUREMENT (ONE DATA POINT)**
- Maximally fit for purpose
- Every level of Miller's pyramid possible
- Learning oriented, information rich, meaningful (both qualitative and quantitative)
- Low stake

**Simple competence model**

**Does**

**Shows how**

**Knows how**

**Knows**

**Professional authenticity**

**Cognition**

**Behaviour**

**Reflective activities by learner**
- Interpretation of feedback
- Planning new goals and learning activities

**Supporting Social Interaction**
- Coaching/mentoring/supervision
- Peer interaction (intervision)

**FIREWALL DILEMMA**

**DILEMMA BETWEEN ACCESS TO RICH INFORMATION AND COMPROMISES ON RELATIONSHIP BETWEEN SUPPORTER AND LEARNER**

**Temporary Assessment**
- Aggregated information evaluated against standards
- Committee of judges
- Decision making, diagnostic, therapeutic, prognostic
- Focus on remediated, not on repetition
- Informative
- Longitudinal
- Intermediate stake

**Assessment at the end**
- Aggregated information evaluated against standards
- Committee of judges
- High stake decision on study progress
- Based on many data points and rich information
- Defendible decision optimised by procedural measures
SO WHAT IS PROGRAMMATIC ASSESSMENT?

- purposeful arrangement of assessment strategies in complete learning program
- single measurement is not perfect, however, an arrangement can be optimal
- assessment for learning
- decisions about learners’ progress need to be robust

SOME DELIVERABLES

- self-assessment instrument evaluating quality of programmes of assessment (Baartman et al., 2007)
- guidelines for constructing programmes of assessment (Dijkstra et al., 2010, 2012)
- theoretical model for programmatic assessment (Van der Vleuten et al., 2012)
- some good practices (Dannefer et al., 2007, 2012; Driessen et al., 2012; Bok et al. submitted)

WHAT ARE THE UNDERLYING PRINCIPLES (1)?

- assessment drives learning
- competence is specific, not generic
- objectivity is not the same as reliability
- no single method can do it all

<table>
<thead>
<tr>
<th>Competence is not generic</th>
<th>Objectivity is not the same as reliability</th>
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<tbody>
<tr>
<td>Testing Time in Hours</td>
<td>MCQ</td>
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<td>----------------------------</td>
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<tr>
<td>1</td>
<td>0.62</td>
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<td>2</td>
<td>0.76</td>
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<td>4</td>
<td>0.93</td>
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<td>8</td>
<td>0.93</td>
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</tbody>
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Ram et al., 1999  Stalenhoef-Halling et al., 1990  Norcini et al., 1999  Swanson, 1987  Van der Vleuten et al., 2012  Driessen et al., 2012; Bok et al. submitted
No single method can do it all

Stimulus format: habitual practice performance
Response format: direct observation, checklists, rating scales, narratives (MINI-CEX, MSP, OSATS, CAT)

Stimulus format: fact oriented
Response format: written, open, computer-based, oral (MCQ, ESSAY)

Stimulus format: hands-on (patient)
Response format: written, open, oral, computer-based (SCT, MCQ, ESSAY, etc.)

Stimulus format: (patient) scenario, simulation
Response format: written, open, computer-based (SCT, MCQ, ESSAY, etc.)

Stimulus format: fact oriented
Response format: written, open, computer-based, oral (MCQ, ESSAY)

multi-modal assessment

information sources

roles

med expert
scientist
worker in HCS
person

WITH MANY THANKS TO PROF. DR. LAMBERT SCHUWIRTH

WHAT ARE THE UNDERLYING PRINCIPLES (2)?
- feasible sample is required to achieve reliable inferences
- qualitative, narrative information carries a lot of weight
- bias is inherent characteristic of expert judgment
- validity lies in the users of the instruments

ASSESSMENT LIKE PATIENT CARE

progress report
lab values
I.C.C.

pathology
radiodiagnostics

WITH MANY THANKS TO PROF. DR. LAMBERT SCHUWIRTH

SCHOLARLY DESIGN ASSESSMENT PROGRAM

Faculty of Veterinary Medicine,
Utrecht University, the Netherlands

DEBBIE JAARSMA, HAROLD BOK, LARS THEYSE, NANCY RIETBROEK, HAROLD BROMMER, GEES VAN DER VLEUTEN

THANK YOU FOR YOUR ATTENTION
No theory ....
Lost in the desert

One theory ....
Galloping with blinkers on

Several theories ....
Fully prepared

THE JOURNEY ‘UTECHT’ MADE
EDUCATIONAL BACKGROUND

- Undergraduate veterinary curriculum: 3 + 3 years
- Focus clinical workplace (last 3 years)
- Clinical rotations/clerkships (1-12 weeks duration)
- +/- 600 students

WEAKNESSES CLINICAL ROTATIONS ‘OLD CURRICULUM’

- ‘Summative feel’
  - assessed every day
  - supervisors were judges
  - too little diversity among students/high scores
  - hardly any repercussions underperforming students
- ‘No formative feel’
  - hardly any structured explicit narrative feedback
  - hardly any direct observations
  - hardly any remediation options
  - performing instead of learning

WORKPLACE BASED EVALUATION & ASSESSMENT PROGRAM

Is it possible to come to **Assessment for Learning** in addition to **Assessment of Learning??**

WHAT?

- multiple structured QUALITATIVE and QUANTITATIVE instruments + multiple raters
- defensible judgement individual student
- valid, reliable, transparent, acceptable & feasible

FEEDBACK: Low stake

JUDGEMENT: Intermediate and High stake
• JUDGMENT PROCEDURES PORTFOLIO’S
  ✓ Annual Review Committee assesses portfolio’s
  ✓ Progress / high stake decisions
  ✓ Remediation according to competency levels

Is it possible to come to Assessment for Learning in addition to Assessment of Learning??

• NEED FOR MORE INFORMATIVE FEED FORWARD
  • SUPERVISORS ‘ENJOY’ THEIR NEW ROLE AS HELPER
  • EDUCATIONAL ANCHORS:
    • SUPERVISORS STILL FIND IT DIFFICULT TO EVALUATE ACCORDING TO WHAT THEY OBSERVED
    • STUDENTS ADOPT THE SYSTEM

• MORE UNDERSTANDING ON FEEDBACK AND HOW AND WHEN STUDENTS SEEK IT
• DESIGN PRINCIPLES ON ASSESSMENT FOR LEARNING
WHY?
- Theories on workplace based evaluation & assessment
- Theories on programmatic assessment
  - clarifying feedback-seeking behaviour in clerkships
  - aggregating outcomes of a competency-based assessment program to make high stake decisions

THEORY

THE JOURNEY ‘UTRECHT’ MADE
WORKPLACE BASED EVALUATION & ASSESSMENT PROGRAM

HOW?
DEVELOPMENT EVALUATION & ASSESSMENT PROGRAM
MASTER CURRICULUM
- problem acknowledged by many
- project management
- project team: clinicians + developing careers/scholarship in education
- educational knowledge team members
- PhD student Harold Bok, DVM
- collaboration Maastricht University
- project leader: veterinarian + educational researcher

HOW?
DEVELOPMENT EVALUATION & ASSESSMENT PROGRAM
MASTER CURRICULUM
- faculty involvement:
  - communication strategies
  - training sessions: > 170 teachers/clinicians
- students: communication + training
- newsletters
- project team members at the workplace
- ePAS support
- close contacts: assessment committee, educational director, clinical directors/head of departments, etc.

IF?
Quality assurance
Research

WHAT?
Evaluation of clinical teachers

HOW?
Web-based questionnaire
Feedback meetings

WHY?
Cognitive Apprenticeship model

THE JOURNEY ‘UTRECHT’ MADE on teacher evaluation

PLEASE BE SAFE.
Do not stand, sit, climb or lean on fences.
If you fall, animals could eat you and that might make them sick.
Thank you.