

Refreshing the curriculum context



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*The Warwick MBChB:
Delivering the Refreshed
Curriculum*



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CEO HEFCE 2014

"If you were going to be an outstanding researcher Megan, you would have done it by now"

Madeline Atkins 1999



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Refreshing the curriculum context

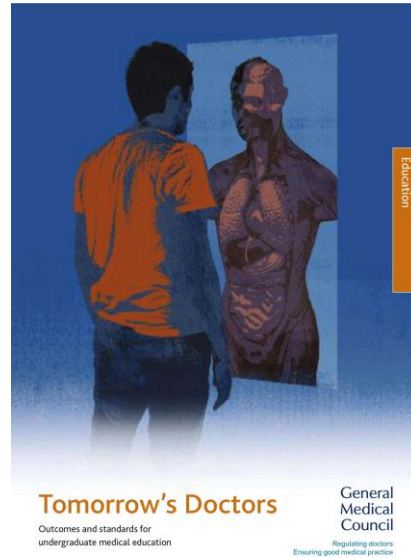


- Across the UK curricula have been updated in response to GMC revisions of Tomorrow's Doctors, but have they kept pace with the changing educational and healthcare environment? Students today have unprecedented access to online information, education and social interaction: new dimensions are being explored for education and training.
- Authentic patient experiences and holistic student support (while reducing administration) is essential to enhancing student success while modernising approaches taken to teaching. This talk aims to lightly challenge and stimulate local responses to new contexts.

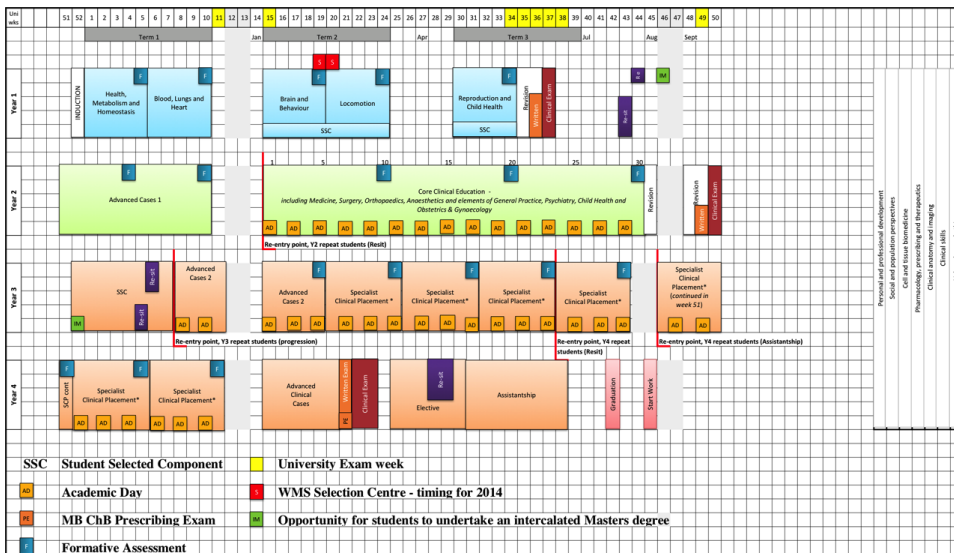


Refreshing the curriculum context

- Tomorrow's Doctors first published in 1993 (now 2009)
- Emphasis on outcomes
- Major curriculum redesign across the sector ~2000
- Reduction in basic science teaching
- Increased patient contact/early experience
- Student selected options
- Increased focus on varied pedagogy
- Revised assessment



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Refreshing the curriculum context



'Clever timetabling'



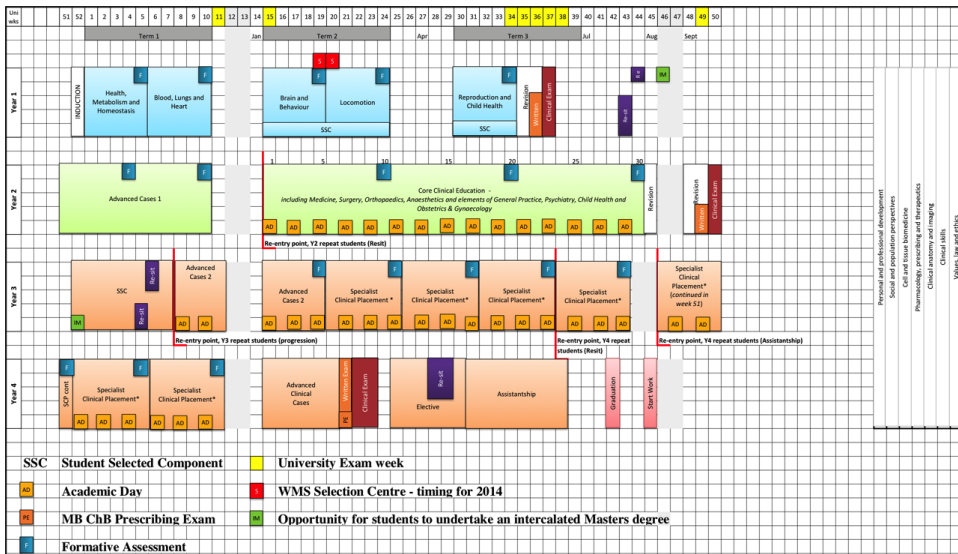
Quote: Reg Jordan, Newcastle University, a long time ago

Pedagogical concepts



- Lectures
 - Synchronous
 - Transmission of knowledge from sage to learner
 - Promotes rote learning and knowledge recall
- Cases/problem based learning
 - Group work around a trigger problem
 - Based on theories of a 'conversational framework' for learning (Laurillard 1993, 2002)
- Clinical experience, skills, professionalism
 - Community, primary, secondary and tertiary care
- Self-study
 - Student selected components, research and inquiry





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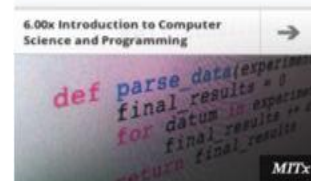
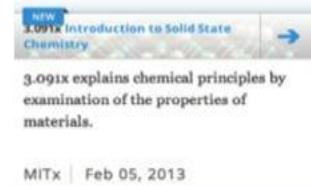
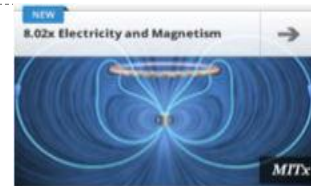
- “Imagine a world in which every single person is given free access to the sum of all human knowledge.” – Sugata Mitra, *World Class: The Lessons of Simplicity for Sustainable Education*, National Geographic, 2010. http://www.nationalgeographic.com/education/2010/06/29/062910_mitra_698.pdf



Sugata Mitra image: ©Newcastle University. Used with consent.

Disruptive technology

- Academic papers – open publishing: *results of publicly funded research ‘free at the point of use’*
- Open access to publicly funded research data
- Open educational resources (OER)
- MOOCs and open courses
- International collaborations
 - OpenCourseWare, EdX, Coursera, Udacity, OERu, FutureLearn, etc.
 - OER programme in the UK
- Social networking

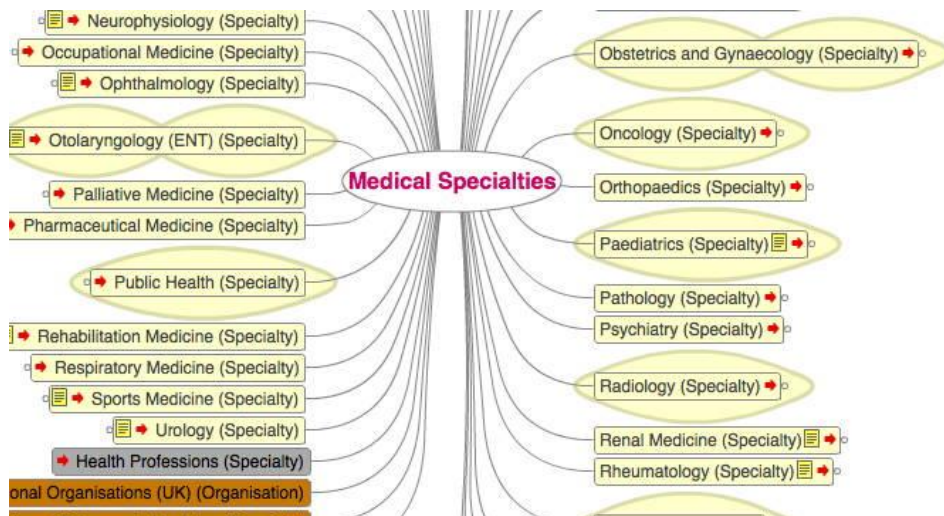


Jack Andraka



©National Geographic, <http://newswatch.nationalgeographic.com/2013/04/10/teen-genius-develops-cancer-test/>

Dynamic learning maps



Social media (many-to-many)

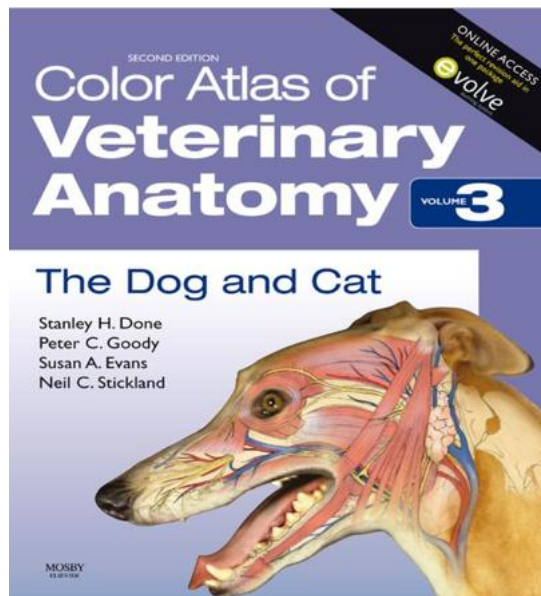


Image created using Wordle; designs, etc. all theirs. Online at <http://www.wordle.net/>

Elsevier content

- veterinary - small enough market sector to test approaches
- social media interfaces

- original image:
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To purchase: <http://amzn.to/15jH2t>



Outputs from Student App Development Day



Photographs ©2012 Newcastle University Megan Quentin-Baxter cc:by



Search:

Search

Showing 1 to 20 of 40.

Results

• A lead is the recording or circuit between two recording points. Depending upon the wiring within the electrocardiograph the same potential difference across a lead could result in an upward or downward deflection of the recording pen

Line: 214 - /publish_oer/uploads/epubs/fileuploads/9780702039911_Veterinary_Medicine/original.epub - View in context

More objective tests have been developed for the horse, which include evaluation by means of telemetry from horses timed over a measured distance on race tracks³ or the use of a treadmill^{1,4} to provide a defined amount of exercise. The amount and intensity of exercise can be varied by the speed and incline of the treadmill and by the duration of the exercise period. The treadmill allows the recording of a variety of cardiorespiratory measurements in the exercising horse^{5,6} and can be used for evaluating the significance of cardiopulmonary disease and for establishing the cause of poor racing performance.

Line: 196 - /publish_oer/uploads/epubs/fileuploads/9780702039911_Veterinary_Medicine/original.epub - View in context

The pulmonary blood flow and systemic shunt (physiological shunt) caused by pulmonary-to-systemic flow ratio show the magnitude of the left-to-right shunt (oxygen content of arterial blood), MV₁₀₁ animals with a patent ductus arteriosus P_vO₂ (oxygen content of pulmonary P_aO₂)⁸ This method assumes the arterial blood is calculated from the measured O₂ content = [Hb] × 1.39 × O₂ saturation arterial blood = 97.5% and that P_vO₂ ventricular septal defect, atrial fibrillation using the right atrial content as the measurement indicated the presence of blood flowing through the lungs was from the right atrium to right ventricle (2.1 mL) was confirmed at necropsy.

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Mashing up content - student app

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Dyspnea, fatigue and a prolonged elevation in heart rate following exercise are signs suggestive of cardiac insufficiency. Frequently, animals with suspect cardiac disease are exercised in an attempt to elicit these signs and to get an estimate of exercise tolerance.^{1,2} In most practice situations the assessment of exercise tolerance is subjective. There is obviously a considerable difference in the amount of exercise that a beef bull and a trained racehorse can tolerate under normal conditions, and the amount of exercise given to any one animal is determined by the clinician's judgement. The rate of fall in heart rate following exercise and the time required to reach resting levels depend upon the severity of the exercise, even in fit horses. Heart rate falls rapidly over the first minute and then more slowly over the ensuing 10-15-minute period.

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There are many noncardiac causes of exercise intolerance and, in a report on the evaluation of the effects of exercise on the cardiovascular system of the horse, it was found that there were more than one problem leading to poor athletic performance.⁷

contexts of speed and endurance with serious biochemical and physiological consequences lessened by adequate training beforehand. See also physical fitness, exertional rhabdomyolysis, heat exhaustion, pulmonary hemorrhage, epistaxis.

Mashing up content - student app

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the portion of the body between the thorax and the pelvis containing the abdominal cavity and abdominal organs. See also

Medicine:

The two principal parts of the ventral ramus of the third lumbar nerve are shown: the more dorsal (lateral cutaneous femoral) is the last of the lateral cutaneous spinal nerve series. The more ventral (genitofemoral) is the last of the medial cutaneous spinal nerve series.

Light, Color and Vision: Paints

From Egg Tempera to Oil

Saylor Foundation from www.webexhibits.org

Printing 1450-1520

Victoria and Albert Museum

Sections

Printing 1450-1520

The invention of printing allowed books and images to become household objects. Both could be reproduced quickly and in large numbers, whereas before this revolutionary technology they could only be drawn, painted or written by hand.

The use of woodblocks to print text had been known in the East since the 8th century. In Europe the technique was first applied to letters, but shortly after 1450 it was adapted also for

Print of an uncut sheet of woodblock printed playing cards, by Gilles Savonin, Lyon, France, 1490-1500. Museum no. B. 998-1920

Oil Painting: Materials and Techniques

Victoria and Albert Museum

Sections

Oil painting - materials & techniques

Oil paint is a combination of a pigment and an oil binding medium. It dries slowly in comparison to other paints, allowing the artist to manipulate the paint. The binder is usually linseed oil. The methods used to process the oil affect the colour, consistency and drying time of the paint. Poppy and walnut oil are also used. They dry more slowly and do not become as yellow.

Ready-made paint was sold in general tins from at least 1600 and in tubes from the 1830s

Palette traditionally believed to have been used by William Blake in 1780

Round brush

Watercolour Painting: Materials and Techniques

Victoria and Albert Museum

Sections

Watercolour painting: materials & techniques

Watercolour paint is a combination of a pigment and a water-soluble binder, usually gum arabic. The pigments

What is a Watercolour?

Victoria and Albert Museum

Sections

What is a Watercolour?

Watercolour paint is made by mixing pigments with a binder, usually gum arabic, and then applying it with water to a support such as vellum (fine animal skin) or

Art Deco: Global Inspiration

Victoria and Albert Museum

Sections

Art Deco: Global Inspiration

Art Deco was an eclectic style and drew on many sources. Designers sought to infuse jaded traditions with new life and to create a

Watercolour Painting: Materials and Techniques

Victoria and Albert Museum

Sections

Watercolour painting: materials & techniques

Watercolour paint is a combination of a pigment and a water-soluble binder, usually gum arabic. The pigments

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Authentic patient cases



- Hundreds of examples of patient cases on-line
 - Many are not licenced for re-use
 - Mostly drill and practise (with MCQs)
 - Some offer triggers
- Authentic experience and structured learning
- Using systems to allow students to sign up for additional clinical teaching
- Systems HAVE to be fully automated / easy to use



The Newcastle “offer”



Professor Suzanne Cholerton,
PVC Teaching and Learning

- THE Leadership and Management Awards, 2013
- Signposting learning resources
- Recordings of all lectures
- Student support / ePortfolios
- Flipped classrooms (signpost content but use curriculum time supporting the learning process)
- ‘Teaching support environment’ to support clinical teachers
- Community and public health
- Student careers in aging, mental health and general practice

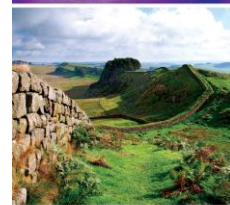
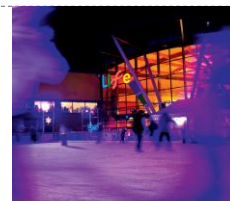
Professions education

- Rethinking the process of learning
- Educating educators to teach
- Student engagement and support – enhancing the student learning environment for all students
- Space for development of professional skills
- New transparency in research environments
- Managing risk in higher education
- Need for leadership development



Opportunities

- Can we improve learning with less knowledge delivery and more early patient experience (i.e. is the balance right)?
- Should we take yet more basic science out of the curriculum/move to post-registration?
- If assessment drives learning should we use more 'open' assessment (rewarding inquiry and synthesis)?
- What are the issues for clinical teachers?



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