

# **Computer-facilitated learning**

Neville Yeomans

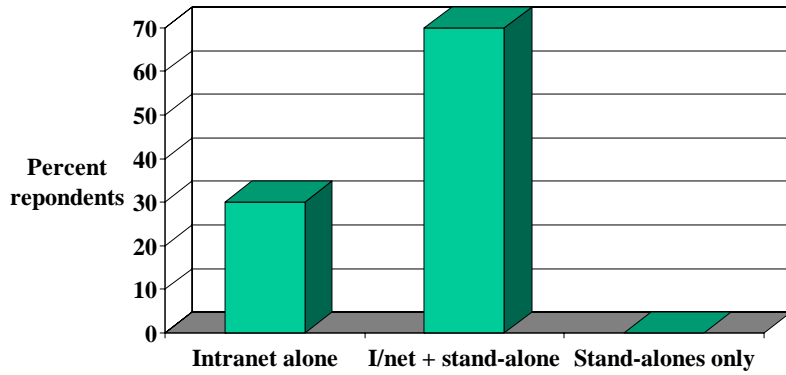
University of Melbourne

## **Computer facilitated learning in U21 partner schools**

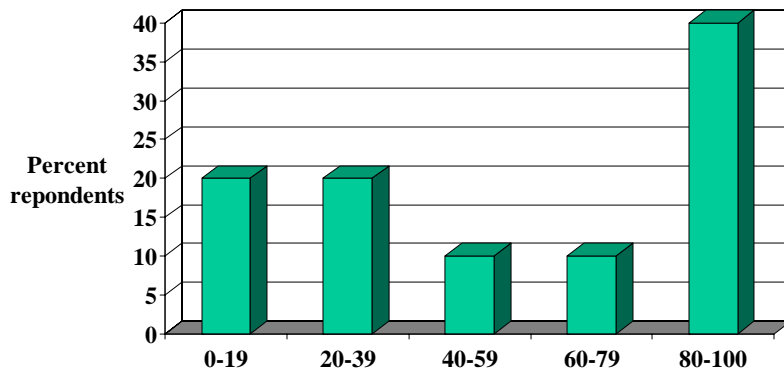
Class size of schools responding to  
survey:

$200 \pm 45$  (mean, SD)

## Networked or stand-alone?



## Proportion of curriculum supported by CFL\*

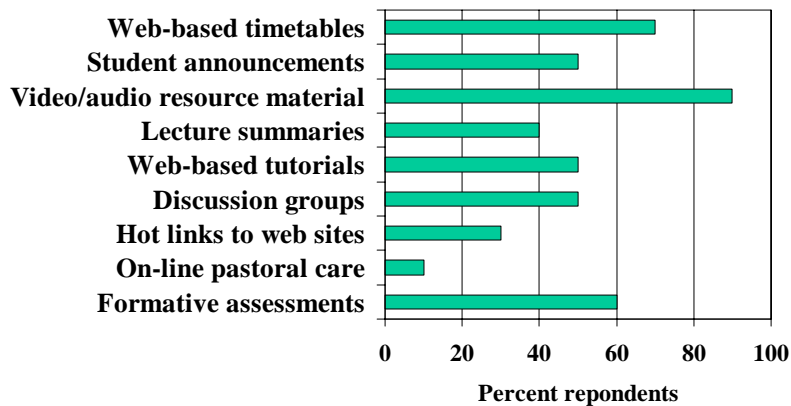


\*Some respondents answered as proportion of **teaching**, others as support of curriculum overall

## What proportion of the material have you created in house?

**Median 80% (IQR 65-95)**

## Examples of uses and materials



Note: personalized timetables for each student at one school

## What is particularly successful or innovative?

- Student information on the intranet
- Web-based PBLs
- Web-based standalone programs, e.g. pathology museum
- Development of framework for sharing basic learning objects (videos, self-assessments etc)
- Versions of curriculum for PDA and WAP-enabled cell phones

## Examples of problems

- **Engaging teachers in development**
- **Delivery to remote locations**
- **Cost of development and equipment**
- **Access to expertise in design and web support**
- Lack of coherence in development
- Development time
- Evaluation
- Stimulating students to use the resources
- Identifying quality shareable resources from other medical schools

“Students prefer teachers” ... or “Tutors before computers”



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Student Instructor **Prof Neville Yeomans** logged in as "nyeomans"

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## Coursework

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## Nutrition, Digestion and Metabolism

**2.01** -Warramba  
Resources page only

**2.02** -Cold and Lonely  
Resources page only

**2.03** -The Ironman  
Resources page only

## Health Practice 2

Resources

Resources

Resources



**PBL delivery and  
resources**

## Semester 2

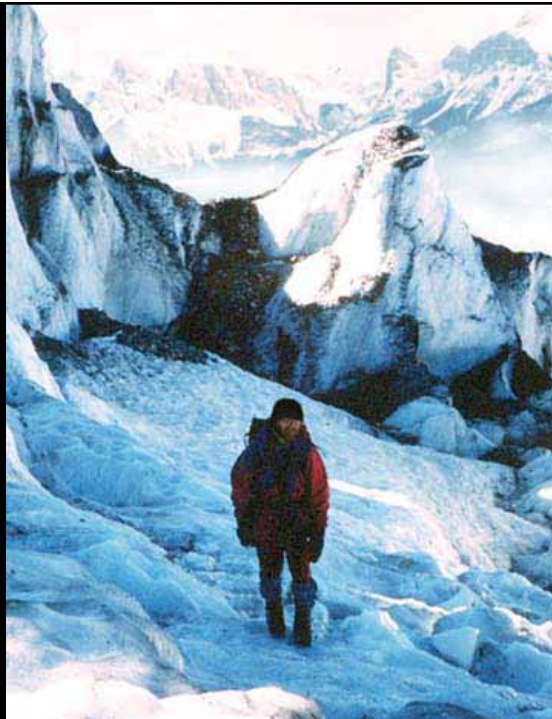
### Nutrition, Digestion & Metabolism

#### PBL 2.2

#### Tutorial 1

### Monday morning

Problem coordinating team:  
Prof. REH Wettenhall  
A/Prof. Sue Elliott



### Trigger

Andrew Settle, a physically fit 23 year old University of Melbourne medical student, undertakes his final year elective in Nepal. Andrew is a keen hiker and uses the opportunity to go on several short treks in the ice-bound Himalayas. The treks are along popular routes that have frequent lodges or huts that supply shelter and food. He therefore carries only small amounts of food and equipment. He takes a sleeping bag but doesn't carry a tent or equipment to make a fire. Just before Christmas he is on a hike along mountain trails at an altitude of 4000 metres when a blizzard causes him to become lost. He separates from his hiking companion as they disagree on the most appropriate direction to take. His only food is two chocolate bars. He finds his way to an ice cave but is unable to find his way back to the trail. Searchers fail to find him. After forty days he is alert, alone and starving.

Status	Reviewed	
Submitted	10/9/2001 23:13:40	
Total points for test	1 out of 1	
Corrected by	Autocorrect	10/9/2001 23:13:40

### Question 1

Which of the following is/are likely metabolic consequences of food intake?

- A. An increase in glycogen synthase activity in the muscle.
- B. Insulin mediated upregulation of acetyl-CoA carboxylase in the liver cytosol.
- C. Decrease in fatty acid transport into the mitochondria due to downregulation of carnitine palmitoyl transferase I by malonyl-CoA.

### Question 1

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- B. Insulin mediated upregulation of acetyl-CoA carboxylase in the liver cytosol.
- C. Decrease in fatty acid transport into the mitochondria due to downregulation of carnitine palmitoyl transferase I by malonyl-CoA.
- D. An increased production of ketone bodies as a consequence of dietary triacylglycerol intake.

Only A, B and C are correct.

1 out of 1

Comments

[True. Click on this for a summary.](#)

# Discussion Groups

- [N\\_ESR, cholestyramine, large oval macrocytes and hypersegmented neutrophils](#) (mcpitman, 11/11/2000 1:03:48)
  - [N\\_RE: ESR, cholestyramine, large oval macrocytes and hypersegmented neutrophils](#) (chi1, 12/11/2000 13:58:29)
  - [N\\_RE: ESR, cholestyramine, large oval macrocytes and hypersegmented neutrophils](#) (jcyk, 11/11/2000 19:05:40)
    - [N\\_RE: RE: ESR, cholestyramine, large oval macrocytes and hypersegmented neutrophils](#) (mcpitman, 11/11/2000 22:46:28)
  - [N\\_RE: ESR, cholestyramine, large oval macrocytes and hypersegmented neutrophils](#) (mcpitman, 11/11/2000 14:40:02)
    - [N\\_RE: RE: ESR, cholestyramine, large oval macrocytes and hypersegmented neutrophils](#) (jchk, 12/11/2000 15:06:13)
    - [N\\_RE: RE: ESR, cholestyramine, large oval macrocytes and hypersegmented neutrophils](#) (spy, 11/11/2000 21:46:28)
- [N\\_Week 6 - ketoprofen and bd](#) (mcpitman, 10/11/2000 22:45:31)
  - [N\\_RE: Week 6 - ketoprofen and bd](#) (rhutam, 11/11/2000 12:41:47)
  - [N\\_RE: Week 6 - ketoprofen and bd](#) (snguyen, 10/11/2000 23:03:04)
    - [N\\_RE: RE: Week 6 - ketoprofen and bd](#) (mcpitman, 10/11/2000 23:17:23)
    - [N\\_RE: RE: RE: Week 6 - ketoprofen and bd](#) (jcyk, 11/11/2000 19:03:52)
- [N\\_Why do type 1 diabetics have low sodium levels in their blood?](#) (markak, 10/11/2000 20:28:18)
  - [N\\_RE: Why do type 1 diabetics have low sodium levels in their blood?](#) (mcpitman, 10/11/2000 20:48:53)
    - [N\\_RE: RE: Why do type 1 diabetics have low sodium levels in their blood?](#) (jcyk, 10/11/2000 22:45:42)
    - [N\\_RE: RE: RE: Why do type 1 diabetics have low sodium levels in their blood?](#) (mcpitman, 10/11/2000 22:48:53)

**Message**

[/Classes/Semester 2 2000 Discussions and Announcements/Discussion/Medical Course Discussion/Open Course Discussion](#)/ESR, cholestyramine, large oval macrocytes and hypersegmented neutrophils

**From:** xxxxxxxxxx

**To:** Semester 2 2000 Discussions and Announcements  
(S2\_2000\_Discussions\_and\_Announcements)

**Date:** 11/11/2000 1:03:48

**Subject** ESR, cholestyramine, large oval macrocytes and hypersegmented neutrophils  
:

From week 7, why does ESR increase with inflammation/active disease? And why on earth was Suzanne commenced on cholestyramine (see "Follow up"). Furthermore, in the Investigation Results on p.7 of week 7, Friday's notes, the blood film is said to show large oval macrocytes and hypersegmented neutrophils. What is the significance of this? (Hypersegmented neutrophils are aged neutrophils with a six- to ten-lobar nucleus.)

Hey Matt, To give a shot at answering your questions:

Cholestyramine is a ammonium ion exchange compound which binds bile acids to form insoluble complexes that are excreted in the faeces. This prevents bile salts from binding to electrolytes and causing diarrhoea...however, this means less fat is able to be absorbed and therefore causes steatorrhoea...well, just a theory anyway...

And I think the funny RBC and WBC is probably due to B12 deficiency?

According to the online medical dictionary, ESR = "A test that measures the rate at which red blood cells settle through a column of liquid. A nonspecific index of inflammation"...I dunno how it works...but I know that her ESR is normal because her Crohn's is under control and therefore there is no inflammation.

Notice the question marks...I don't really know either...

Chilli



De anatomische les van Dr Nicolaes Tulp  
Rembrandt Van Rijn