

CHEM 0011 USING WEB 2.0 TECHNOLOGY

Rosamaria Fong – Instructor, BCIT

Jimmy Lowe – Instructor, Interim TE Program Head, BCIT

CHEM 0011 – TECHNOLOGY ENTRY (TE) PROGRAM

- + Who takes the TE program?
- + What is the purpose of the TE program?
- + Who are the TE students?
- + What is the course load for the TE students?
- + How does CHEM 0011 fit in the TE program?

TE PROGRAM GRANTS PROVISIONAL ACCEPTANCE

into BCIT engineering and technology programs:

- + 4 programs requiring higher level chemistry courses:
 - * Biomedical Engineering
 - * Food Technology
 - * Mining and Mineral Exploration Technology
 - * Occupational Health and Safety
- + 13 other engineering technology programs - no more chemistry courses

CHEM 0011

INTRODUCTORY APPLIED APPLIED CHEMISTRY

Face-to-face Classroom course

Each week students attend:

- 3-hour lectures,
- 1-hour tutorials, and
- 2-hour labs

Fall 2010 – In a class of 40 students, 3 students will continue in a technology where they will take higher-level chemistry courses.

CHEM 0011 – CHALLENGES

- + Equivalent to Grade 11 Chemistry – taught in 15 weeks
- + Most students do not need chemistry in their future studies
- + Students lack motivation to do the best that they can
- + Students have the tendency to do just enough to pass

CHEM 0011 – 1993-95:

**Traditional classroom lectures
and limited audio-visuals**

Course components:

- Assignments (20%)
- Lab reports (20%)
- 2 written tests (20%)
- Final Exam (40%)

CHEM 0011 – 1996-98

Introduced a static website with:

- + online course notes
- + online self-marking practice questions
- + online self-marking assignments



<http://nobel.scas.bcit.ca/chem0010>

CHEM 0011 – 1996-98

This was the only course in the TE program with a course website

PROS	CONS
<ul style="list-style-type: none">• Course website was a 24-hour resource.• Self-marking feature gave students immediate timely feedback.	<ul style="list-style-type: none">• Most students did not have Internet access from home except when they were at school.• Internet connection speed was slow.

Course components:

- Weekly online assignments (20%)
- Weekly online prelabs (10%)
- Lab reports (20%)
- 2 written tests (20%)
- Final exam (30%)

CHEM 0011 – 2000-09

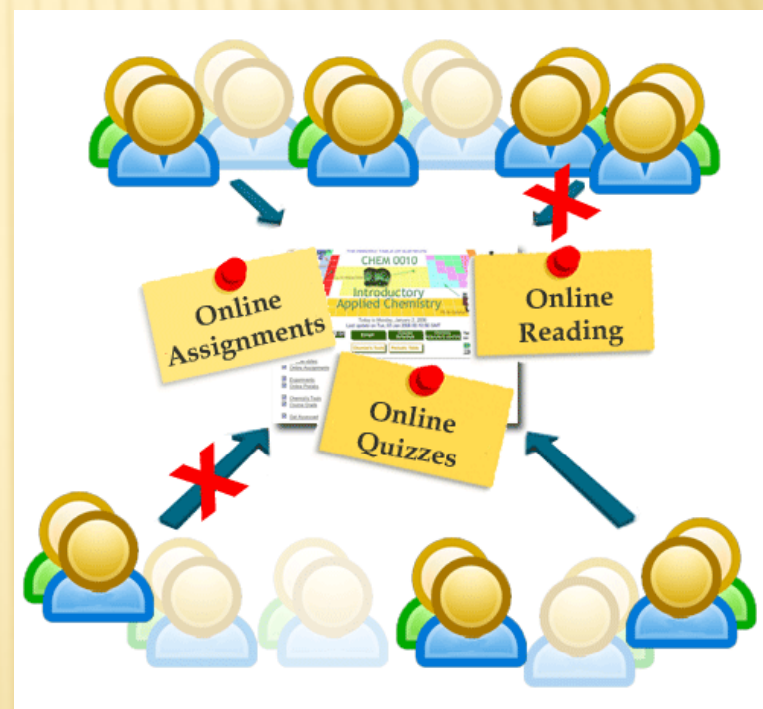
- + Continuously refined and tweaked the course website

PROS

- Majority of the students had Internet access from home.
 - Internet connection speed became faster.
- + Other courses with added web components were growing
 - + More expectations of students to “do stuff” online

CONS

- Is this information overload for the students?



CHEM 0011 – FALL 2010

CHEM 0011 course website underwent a transformation.

<http://bit.ly/chem0011>

Built on: Wordpress – frequent communications
 MediaWiki – course notes in a familiar framework

Uses: Twitter – reminders and announcements
 PollDaddy – create polls

CHEM 0011 – FALL 2010

As a result of the course website transformation, there have been noticeable improvements:

PROS	CONS
<ul style="list-style-type: none">• Never miss a post - subscribe by email and RSS• Searchable course notes in Wiki format• Follow course reminders and announcements on Twitter• Polls allow for anonymous voting	<p>We have some Initial feedback</p>

CHEM 0011 – FALL 2010

CHEM 0011 became a student-centred website

PROS

- Relied less on the students to check-in to retrieve content
- Technology was chosen such that it could push information to alert students

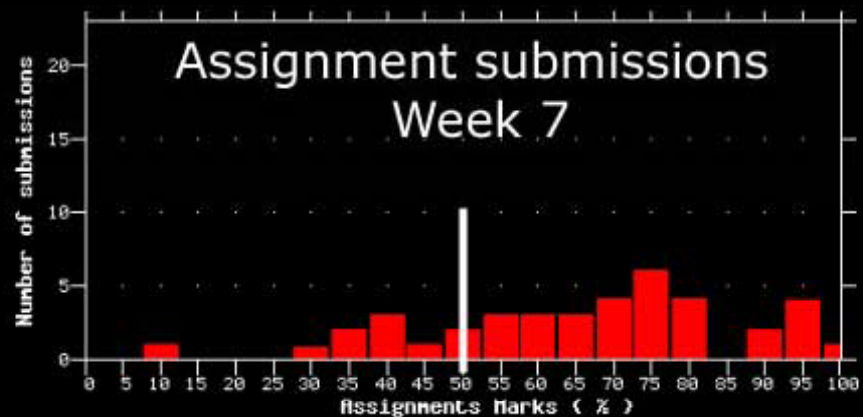
CONS

We have some Initial feedback



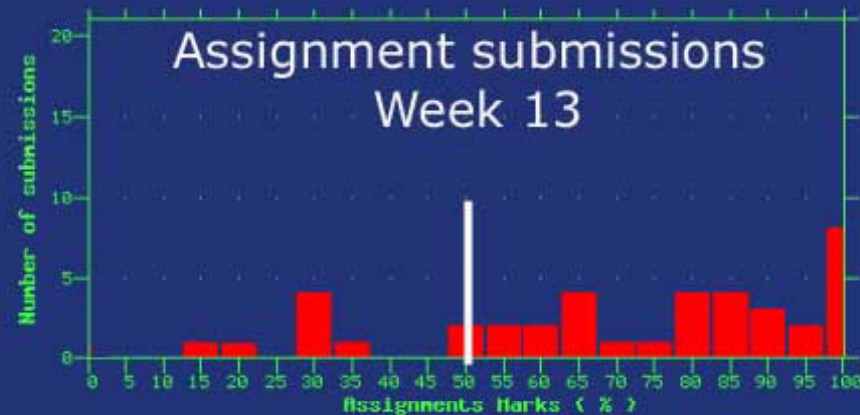
CHEM 0011 – ANY EFFECTIVE CHANGES?

Fall 2010 - Online assignment scores for 40 students



10 scored below 50%
11 scored above 80%

Average assignment scores: 64%

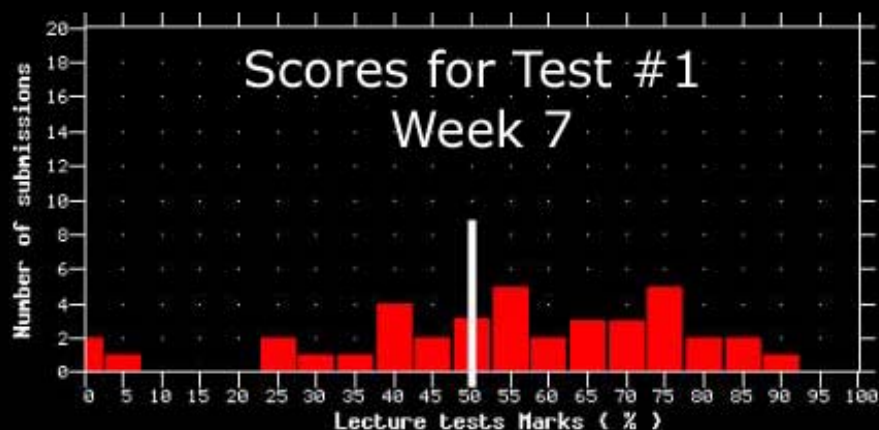


9 scored below 50%
21 scored above 80%

Average assignment scores: 70%

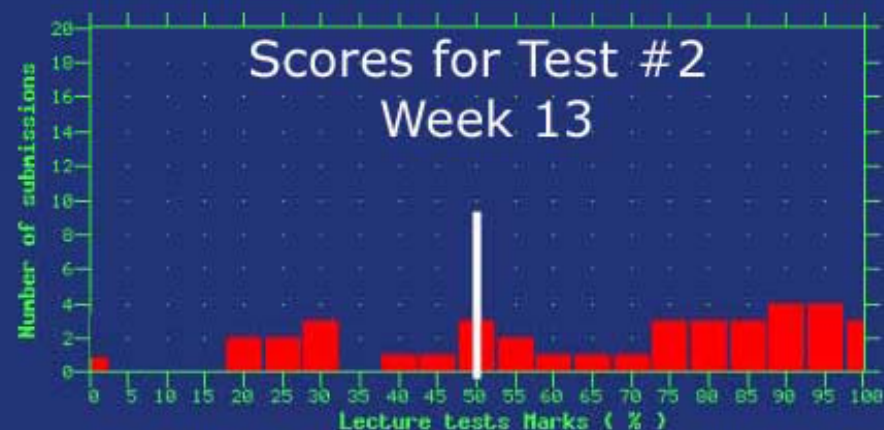
CHEM 0011 – ANY EFFECTIVE CHANGES?

Fall 2010 -Test scores for 39 students



16 scored below 50%
5 scored above 80%

Average Test score – 54%



13 scored below 50%
17 scored above 80%

Average Test score – 62%

CHEM 0011 – FALL 2010

Based on 32 student feedback:

- + 24 subscribers
- + Don't make subscribing mandatory
- + Not everyone has a Twitter account
- + Polls/bonus marks are helpful
- + Suggests Facebook integration

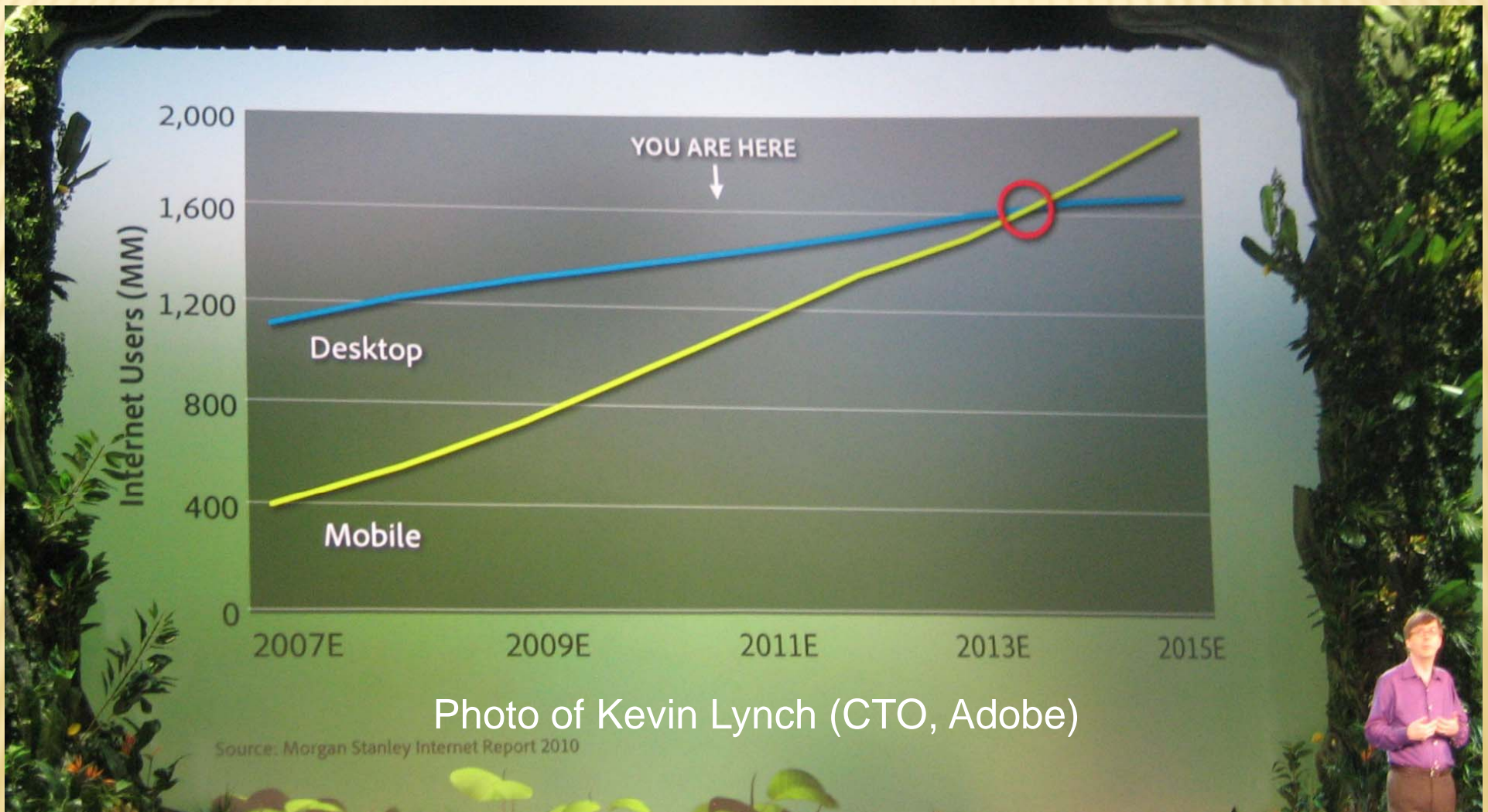
CHEM 0011 – RECENT POLLS ON MOBILE DEVICES

Class poll: What phone do you carry?

Results from 33 students

9 Blackberry	1 I don't have a phone
9 iPhone	
4 Sony Ericsson	
3 Android	
2 Samsung	
1 Windows Mobile	
1 LG Masterpiece	
1 Motorola	
1 Nokia	
1 MP3 Phone	

ADOBE MAX CONFERENCE - 2010



CHEM 0011 – WHAT'S NEXT?



Students will be coming to my classroom with newer and better mobile devices.

Slate-based computer:

- Apply iPad - iOS
- Samsung Galaxy Tab – Android
- HP Slate 500 - Win7
- Blackberry PlayBook
- ... and more ...

Design with mobile devices in mind.

CHEM 0011 – [HTTP://BIT.LY/CHEM0011](http://bit.ly/chem0011)

Wordpress :: MediaWiki :: Twitter :: Polldaddy

The screenshot shows the homepage of the CHEM 0011 website. At the top is a navigation bar with links: HOME, WELCOME, ASSIGNMENTS, LABORATORY, CALENDAR, UNIT 1, UNIT 2, UNIT 3, UNIT 4, UNIT 5, UNIT 6, UNIT 7, UNIT 8, and UNIT 9. Below this is a banner featuring the BCIT logo and a periodic table with specific elements highlighted: Calcium (Ca) in Calcite, Copper (Cu) in Malachite, Lead (Pb) in Galena, and Bromine. The main content area has a sub-navigation bar with links: ANNOUNCEMENTS, ASSIGNMENTS ✕, BONUS, CHEMIST'S TOOLS, LABS, and LECTURES ✕. The 'Welcome' section contains the following text:

Welcome

Welcome to CHEM 0011!

To use this website properly, you need to enable popup windows on your browser.

It is extremely important that you spend as much time as you can working through the interactive problem examples and exercises in this site as well as working through the problems at the end of each chapter that illustrate the concepts introduced in the online units.

A **scientific calculator** is REQUIRED for this course. The **Technology Entry Program** has specified the use of the **Sharp EL-520W calculator**. As we will be using very large numbers such as 6.02×10^{23} , your calculator must be able to use scientific notation when entering, storing, and displaying numbers.

On the right side, there is a search bar and a sidebar with the following content:

- A CHANCE TO NETWORK
- Dec 1, 2010 - Adobe CS5 Launch Party
- Register: <http://nobel.scas.bcit.ca/signup>

Thank you