Learning Attitude & Motivation:
How Appropriate TLAs can Help our Students?

17 October 2007

Guest Speakers
Professor Lilian Vrijmoed
Dr Louis Ma
Professor K S Chiang

Dr Eva Wong
Education Development Office
Intended Outcomes

At the end of this session, you should be able to:

- Describe how attitude and motivation can affect student learning
- Outline some useful examples to help motivate students to learn and improve their learning attitude
- Identify 1-2 useful strategies and apply them to your own teaching
Outline

- A recap on LASSI – attitude & motivation
- Some strategies to help our student learn
- Examples from the Guest Speakers
- What does the learning theory tell us?
- Further STEP sessions
LASSI results are confidential to the University thus are not included in this shortened presentation on a publicly accessible URL.

Members of the University who would like to have a full copy of this presentation can contact the Education Development Office via email at edo@cityu.edu.hk
Exercise

Think-Pair-Share

Think:
On the piece of paper given to you, write down one reason why you think our students score so low on the attitude & motivation scales.
Learning & Study Strategies Inventory (LASSI)

- A 10 scale-80 item assessment of student awareness and use of learning and study strategies.

- Divided into three correlated groups (traffic light system):
  - **Self Regulation** is Concentration (CON), Time Management (TMT), Self-Testing (SFT), Study Aids (STA).
  - **Skill** is Information Processing (INP), Selecting Main Ideas (SMI), Test Strategies (TST).
  - **Will** is Attitude (ATT), Motivation (MOT), Anxiety (ANX).
Purpose of LASSI at CityU

- As a **compulsory** sampling tool for all UG freshmen
- As a useful diagnostic tool pre, interim, and post-long term intervention
- As a means of identifying areas for more targeted intervention
- As an additional means of measuring and demonstrating progress with ‘value-added’ generic learning outcomes
- **Traffic-light system** of help for students
Attitude

- The ‘Attitude’ item measures students’ general attitude towards school and their general motivation for succeeding in school/college/university.
- Students who score low on this scale need to work on higher level goal setting and reassess how university fits into their future aspirations.
- Life relevance
Motivation

- The ‘Motivation’ scale measures the degree to which students’ accept responsibility for performing the specific tasks related to school success.
- Students’ who score low on this scale need to work on goal setting at the more specific level of individual tasks and assignments.
- Internal Attribution vs External Attribution
The Social Cognitive Model consists of two factors:

1. **Exposure to Positive ‘Models’- YOU!**
2. **How capable the student believes he/she is.**

   - Students’ beliefs about their ability to succeed at a learning task are more important than their actual skill level or the difficulty of the task.
What we can learn from LASSI results?

- Students who score low in ‘Attitude’ and ‘Motivation’ will need to:
  - Develop a better understanding at how university and their academic performance relates to their future goals
  - Accept more responsibility for their academic outcomes and learn how to set and use goals to help accomplish specific tasks
Exercise

Think-Pair-Share

Pair & share:

With your answer in the last exercise and now knowing a bit more about the effect of attitude and motivation on student learning, discuss your neighbour (left or right, up to you) one method/way/strategy to help your students improve in these aspects.
Understanding Students’ Goals

- Students have multiple goals:
- Passing exams / getting a qualification
- Gaining social approval / status
- Acquiring subject / professional knowledge and skills
- Developing generic skills: interpersonal skills, problem-solving, creativity, etc.
- Achieving personal development: self confidence, sense of achievement, moral development, etc.
Some Strategies to help our student learn

- Have a realistic expectation of the ability of your students
- Check initial knowledge
- Help students to ‘bridge’ their knowledge
- Give appropriate reading materials
- Proceed progressively in teaching:
  - Move from fundamentals to more complex
  - From more guidance to more independence
- Help students learn how to learn
- Help students develop confidence
Help Students achieve their learning goals

- Explain the ‘whys’ of learning tasks
- Emphasize thinking and problem-solving rather than memorization and recall
- Focus on process as well as outcomes of learning
- Encourage collaborative group learning
- Give students autonomy and choice
- Ensure reasonable workload
Sharing of Experience & Examples from our Guest Speakers
Motivating Students to Learn Mycology

Lilian Vrijmoed
Department of Biology & Chemistry
Motivating Students to Learn Mycology

Background

- BCH2002 *Cells and Microorganisms* is a core course in BSc (Hons) Applied Biology Programme

- Students do not have much prior knowledge as it is not in the AL syllabus

- Course syllabus designed to enable students to acquire knowledge on the organisms rather than on the process

- Unfamiliar mycology language based on Greek / Latin
Motivating Students to Learn Mycology

- **Show and explain** to students the Intended Learning Outcomes (ILOs) of the course

- Ask **students to express their expected ILOs** by giving them some guidelines
  - Content knowledge
  - Teaching & Learning activities
  - Thinking skills (Bloom’s Taxonomy of Learning – remembering, understanding, applying, analyzing, evaluating, creating)
  - Academic Skills – e.g. as listed in LASSI
Motivating Students to Learn Mycology - content areas

Student responses on content areas:

- the evolution of the other animals from the prokaryotes and eukaryotes
- the benefits and harmfulness of the microorganisms in the human life
- What is the current situation in China and the rest of the world, How they draw up measures to deal with these problems.
- I am interested in learning more about common microbial diseases, such as the symptoms cause by different bacteria and the methods to avoid the diseases
Motivating Students to Learn Mycology - content areas

Student responses on content areas:

- the evolution of the other animals from the prokaryotes and eukaryotes ........discussion board

- the benefits and harmfulness of the microorganisms in the human life ........video

- What is the current situation in China and the rest of the world, How they draw up measures to deal with these problems ........discussion board

- I am interested in learning more about common microbial diseases, such as the symptoms cause by different bacteria and the methods to avoid the diseases .......PBL for tutorial
Student responses on teaching and learning activities:

- Current Issues or cases that related to microorganisms can be our practical examples in class, so that we can learn from these news under an interesting atmosphere.

- More video showing in class to make the class more interesting and consolidate what we have learnt.

- More interaction between the lecturers and students.

- Apart from lectures, tutorials and laboratory classes, I suggest having a website for students to ask questions and answered by tutors or lecturers.
Motivating Students to Learn Mycology - TLAs

Student responses on teaching and learning activities:

- Current Issues or cases that related to microorganisms can be our practical examples in class, so that we can learn from these news under an interesting atmosphere......PBL in tutorial

- More video showing in class to make the class more interesting and consolidate what we have learnt

- More interaction between the lecturers and students

- Apart from lectures, tutorials and laboratory classes, I suggest having a website for students to ask questions and answered by tutors or lecturers
Problem-based Learning in Tutorials

During the Chinese New Year Holiday period, it was reported in the newspaper that several times that different groups of people have suffered from food poisoning after eating the popular country dish “basin food”. Some of the victims even have to be hospitalized.

- What are the microbes which can cause “food poisoning”?
- What are the factors leading to this “food poisoning” incident?
- What are the symptoms of food poisoning in man?
- How can food poisoning be prevented in general?
Motivating Students to Learn Mycology - TLAs

Problem-based Learning in Tutorials

During the Chinese New Year Holiday period, it was reported in the newspaper that several times that different groups of people have suffered from food poisoning after eating the popular country dish “basin food”. Some of the victims even have to be hospitalized.

- What are the microbes which can cause “food poisoning”?
- What are the factors leading to this “food poisoning” incident?
- What are the symptoms of food poisoning in man?
- How can food poisoning be prevented in general?

Alignment of students’ expectations with your ILOs

- **Content** - relate to daily life activities

- **Skills**
  - Search and process information
  - Low and high cognitive skills (Bloom’s taxonomy)
  - Team work skills
  - Oral presentation skills
Student responses on teaching and learning activities:

- Current issues or cases that related to microorganisms can be our practical examples in class, so that we can learn from these news under an interesting atmosphere......PBL in tutorial

- More video showing in class to make the class more interesting and consolidate what we have learnt......video on “Fungi – Friend or Foe”

- More interaction between the lecturers and students......”Think, Pair and Share”

- Apart from lectures, tutorials and laboratory classes, I suggest having a website for students to ask questions and answered by tutors or lecturers......discussion board
Motivating Students to Learn Mycology - skills

Student responses on specific academic skills:

- how to collect and choose the right information effectively
- how to use the brief and simple English or use point form to explain some basic knowledge in the area of microbiology and cell biology
- How to actually “learn” the thing instead of just memorizing all the stuff for the exam and then forget most of them the next semester
- develop effective group work and critical thinking and analytical skills
Motivating Students to Learn Mycology - skills

Student responses on specific academic skills:

- how to collect and choose the right information effectively
- how to use the brief and simple English or use point form to explain some basic knowledge in the area of microbiology and cell biology

Teaching and Learning Activities and Assessment Tasks

- How to actually “learn” the thing instead of just memorizing all the stuff for the exam and then forget most of them the next semester
- develop effective group work and critical thinking and analytical skills
Motivating Students to Learn Mycology - alignment

Two activities and assessment tasks:

Video
- Post on BB site
- Show in class and discuss
- Assignment – write a summary

Website Search
- Search and select
- Write summary
- Write appraisal

Alignment of students’ expectations with your ILOS

- **Content** - widen knowledge base

- **Skills**
  - Process information
  - Select main ideas
  - Writing in “mycology” language in English
  - Develop analytical and evaluation skills

Allow opportunity to practise and develop
Motivating Students to Learn Mycology - skills

Student responses on specific academic skills:

- how to collect and choose the right information effectively
- how to use the brief and simple english or use point form to explain some basic knowledge in the area of microbiology and cell biology

Teaching and Learning Activities and Assessment Tasks

- How to actually “learn” the thing instead of just memorizing all the stuff for the exam and then forget most of them the next semester

OPEN BOOK TEST and EXAM

- develop effective group work and critical thinking and analytical skills........ PBL
Motivating Students to Learn Mycology

Sharing some ideas in “motivating students”:

- Make your **ILOs explicit**
- Give your **students** opportunities to play a role in **designing**
  - Intended Learning Outcomes
  - Teaching & Learning Activities
  - Assessment Tasks
- Connect content with **daily life examples**
- Design activities to **engage** students in **active** learning process
Motivating Student Learning
Practical Examples

Louis Ma
Acting Head (IS)
and
Member of UGC Task Force on “OBTL”
Motivating Student Learning Examples
Intended Learning Outcomes

1. Compare and contrast various Techniques in Motivating Student Learning
2. Identify the most important success factors which affect **Student Achievement**
3. Analyze Practical Examples in Motivating Student Learning
Motivating Student Learning
Its Importance in Teaching

“Project Management” is the most Important Course in the MSc-IS-Mgt programme!

“Motivating Student Learning” is the most Important Success Factor in Teaching!

How effective is this approach in Motivating Student Learning?
17 Important Factors on Student Achievement

- Clarity of course objectives
- Presentation Clarity
- Course/presentation organization
- Relevance of subject
- Stimulation of interest
- Enthusiasm for teaching
- Subject knowledge
- Sensitive to class progress
- Communication skills
- Fairness/quality of exam
- Feedback (Nature, quality and frequency)
- Encouragement of discussion
- Course’s intellectual challenge
- Concern for students
- Availability and helpfulness
- Value of textbook
- Value of supplements

Similar Projects but Different Results?

- **Project A** in Bank AA: completed in 3 years at HK$4m.
  - Users considered the project extremely successful
  - Project Manager became Senior Systems Manager after the implementation.

- **Project B** in Bank BB (almost identical to Project A): completed with better functionality in 2 years at HK$2m.
  - Users were very unhappy
  - Project Manager was asked to leave.

What went WRONG?

How to Prevent/Manage these Problems?
IS5542: Project Mgt & Outsourcing

Intended Learning Outcomes

1. Explain the contemporary models, methodologies and international standards of information technology project management;
2. Describe various models of IT outsourcing and different practices of IT offshoring;
3. Apply the project management knowledge and practical skills to the different stages of outsourced IT projects;
4. Demonstrate creative problem solving skills in formulating IT sourcing and offshoring strategies with reference to the specific business context;
5. Exercise good communication and interpersonal skills in planning, executing, and controlling outsourced IT projects.
Introduction
1. Project Mgt & Certifications
2. Project Mgt Context & Processes
3. Intro to IT Outsourcing

Project Mgt Core Body of Knowledge (PM-BoK)
4. Project Integration Mgt (Project Mgt Objectives)
5. Scope Mgt
6. Time Mgt (Microsoft Project Workshop at CSC)
8. Cost Mgt
8. Quality Mgt (Means of Project Mgt)
9. Human Resource Mgt
9. Procurement
10. Communications
10. Risk Mgt

Guest Lectures
7. Managing IT Outsourcing Projects in Banking (Former CIO of HSBC)
11. Managing IT Outsourcing Projects – A Vendor’s Perspective (Chairman of EDS, North Asia)

Application and Sharing
(12 & 13) Emerging Issues on and Resolutions to Project Mgt and Outsourcing
(12 & 13) Student presentations and peer evaluation
Student Attitude and Motivation: Practical Examples

Kin Chiang
Department of Electronic Engineering
Course Information

- Programme: *Electronic and Communication Engineering*
- Course name: *Optical Communications*
- Level: Final-year elective (Level 4)
- Mode of study: Full-time and part-time
- Student number:
  - 40 – 50 in early years
  - 20 – 30 in recent years
- Course work (30%): Assignments, test, lab report
- Failure rate: 10 – 15%
  - I have a bad name of failing students!
- Grade-A students: 10 – 15%
Who fail my course?

- Those who cannot cope with the subject
- Those who cannot find time to study
- Those who just want to pass the course with a minimum effort
My Practice

- Emphasize the importance of the course
- Try to make the subject content and my delivery interesting
- Review previous lessons before starting a new one
- Encourage students to ask questions or answer questions
- Set take-home and in-class assignments
- Ask students to re-do the mid-term test paper as an assignment --- students do not like it!
- Get students to solve tutorial questions in the class (never publish model answers)
- Ask students to write short reflection statements
- Allow students to bring their prepared sheets to the exam
Four levels of people:

People who are born to be self-learners (生而知之者)

People who can be taught to learn (學而知之者)

People who learn when they are in desperate situations (困而學之)

People who do not learn even when they are in desperate situations (困而不學)
What does the learning theory tell us?

- Watch out for the attention span
- Provide a meaningful benefit for each topic, in the form of “why you should about this” scenario
- Use visuals
- Use redundancy to increase understanding and retention
- Use “chunking” to reduce cognitive overload
- Maintain interest with variety and surprise
- Use the 80/20 rule to reduce cognitive overload
- Use mistakes and failures in story-telling
- Provide a safe and relaxed environment for learners to learn with confident
- Never underestimate the power of FUN to keep people engaged
Motivation for Learning

Learners need to know where they are going and have a sense of progress towards their objectives.

- Where are you going?
- Why do you want to get there?
- Are you making progress?
- How do you know when you are there?

*The first two questions are about setting goals, the last two about assessing outcomes.*
Getting students engaged

- Students are more likely to engage in learning tasks that they are interested in and have confidence of successful completion:
  - Clear instructions on what, how and when
  - Manageable tasks and reasonable deadlines
  - Appeal to personal interest or needs
  - Choice and autonomy
  - Feedback on progress
**What things does the workshop include?**

**Will**

<table>
<thead>
<tr>
<th>Area</th>
<th>How to improve</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANX Anxiety</td>
<td>• Learn to cope with anxiety</td>
<td>• Plan ahead</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Learn relaxation techniques</td>
</tr>
<tr>
<td>ATT Attitude</td>
<td>• Set long-term goals</td>
<td>• Reassess how your study at university fits into your future</td>
</tr>
<tr>
<td>MOT Motivation</td>
<td>• Set goals</td>
<td>• Motivate yourself</td>
</tr>
<tr>
<td></td>
<td>• Accept more responsibility</td>
<td>• Reward yourself</td>
</tr>
<tr>
<td></td>
<td>• Attribute success to your efforts</td>
<td>• Say to yourself that you have control over your life</td>
</tr>
</tbody>
</table>
Some evidence for learning outcomes

“Recent literature tells us that changes in the teaching practices will lead to changes in student learning”
Keith Trigwell, Institute for T&L, University of Sydney, 20 June 2007

“…the impact of the pedagogical practices were not determined simply by the …, but on whether ‘empowerment’ permeates the curriculum goal and process…”
N.Law, Y. Lee & A.Chow
Centre for Information Technology in School and Teacher Education, University of Hong Kong, 2002

“…In developing the teaching framework for the course, staff at the University of South Australia have engaged in an on-going process of reflection and revision which has ultimately resulted in an enhanced curriculum, new modes of delivery and higher quality learning outcomes for students…”
H. Harris & T. Bretag
School of International Business, University of South Australia, 2003

“…The results suggest that faculty interacting with and providing constructive feedback to students were significantly and positively related to students’ self-reported gains in several design and professional skills…”
S.A. Bjorklund, J.M. Partene & D. Sathianathan, School of Engineering Design, Technology and Professional Programs, The Pennsylvania State University, 2004


STEP 2007-08

Programme Outline

With the principle of constructive alignment adopted in the OBTL project of the University, STEP 2007/08 aims to provide practical examples for teachers to adopt for their Teaching and Learning Activities as well as Assessment Tasks. STEP consists of 9 related sessions where participants are engaged in a range of interactive activities to explore how to create an optimal learning environment to support student self-regulating learning. Faculty members and students will be invited to share innovative practices and experiences.

http://www.cityu.edu.hk/edo/workshops/step.htm
Thank you!
The Chung King Mansions Game!

1. **Look** at the picture for 30 seconds.

2. **Now try to remember** as many numbers as you can.
Really it is a ‘chunking’ game

1. Now look at this picture for 30 seconds.

2. Now try to recall as many numbers as you can.

What is the difference?
Foo
- bullet one
- bullet two
- bullet three

Foo Case Study:
The ABC company had a severe problem with inventory using Bar. The CIO knew the switch to Foo would be especially hard for the developers of the XYZ.

100
90
80
70
60
50
40
30
20
10
0

Effort
Result

20%
80%

Weak Learning Powerful

Surprise = powerful learning

Surprise Predictability Expected

Words alone
Pictures + Words
Pictures alone

Strategic Teaching Enhancement Program