

DEPARTMENT OF PHYSICS

Teaching Tips and Strategies for Teaching Assistants at University of Toronto

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TATP Science Trainers

5 September 2012

What do we do?

CUPE-Mandated
First Contract
Training

Year Long Workshop
Series

Fundamental &
Advanced
Certificates in
University Teaching

Teaching Assistants' Training Program

<http://www.teaching.utoronto.ca/gsta/training/tatp.htm>

Teaching Assistants' Training Program (TATP)

- Peer-training program
- New and experienced TAs
- Two certificate programs
 - TF (6 workshops, 1 yr)
 - AOTP (10 workshops, 2 practicum components, 2 yrs) :
- Teaching excellence award
- Support
 - In-class observations
 - Teaching dossier reviews
 - Consultations
 - Microteaching
- Office: Robarts Library, 4th Floor



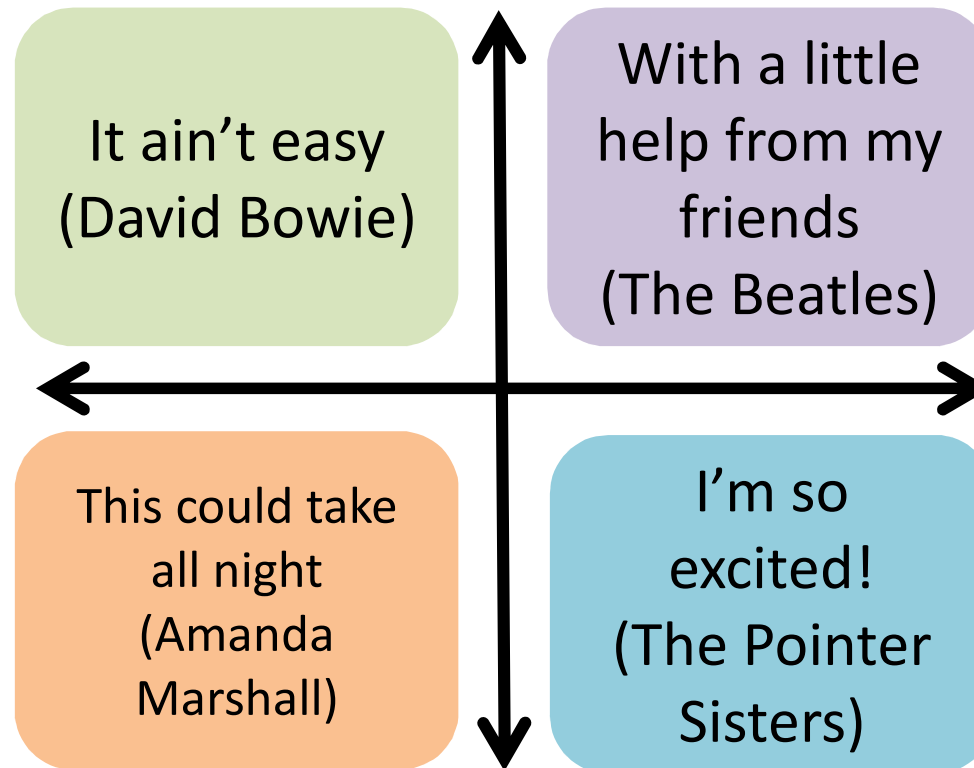
Four corners

Directions:

1. Go to your selected corner
2. Pair up with someone in the same corner
3. Introduce yourself (name, TA assignment)
4. Share your response to the prompt
5. Listen actively to your partner's response and be prepared to share what you heard your partner say
6. A partnership will be randomly chosen to share responses from each other



When I think of TAing this year, I think...



Today's training

- Your first class
- Communication
- Classroom management
- Grading
- Teaching strategies
- Further resources



Imposter Syndrome



- You are not alone!
- Re-evaluate your role as TA: Are you the 'fountain of knowledge', or a 'guide-by-the-side'?
- Change your comparison group
- Look at your achievements objectively

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Your first day

Before

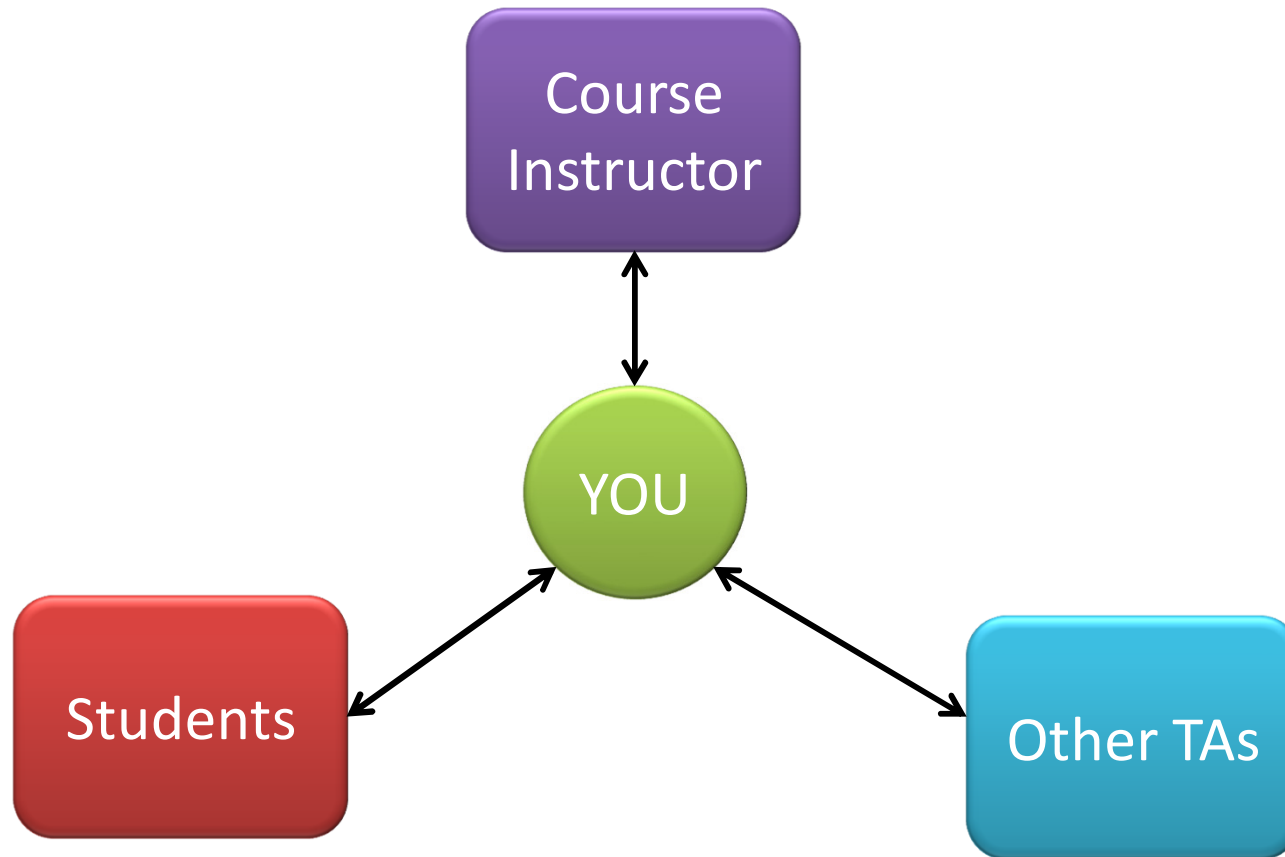
- Know the room and location
- Prepare your lesson
- Practice

On

- Arrive early
- Display contact info
- Introduce yourself
- Use an icebreaker
- Establish ground rules
- Outline expectations
- Leave time for questions



Communication



Communication with Course Instructor

1 Set Expectations

Identify your duties, roles and responsibilities
Establish communication methods: email, meetings
Determine the course focus/outcomes
Other training opportunities and resources

2 Middle of Term Check Up

Are you fulfilling the job required?
Common student issues to be addressed by the prof: email/communication, Midterm exam (marking scheme / rubrics)
Discuss time/work distribution

3 Feedback & Improvements

Feedback from students & prof: directly or formal review process
Reflection on course outcomes:
•Effective assignments?
•What could be added?
•What can be taken out?

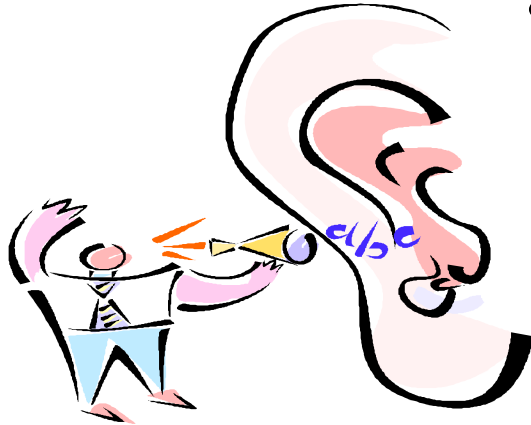


Communication with other TAs

- Clear division of responsibilities
- Discuss lesson/lab plan and work together to solve problems
- Discuss problems, student issues, but maintain student confidentiality!
- Share teaching approaches & skills.



Communication with students



- **How?**
 - In person
 - Email
 - Blackboard
 - Feedback (grading)
- **What?**
 - Academic material, Expectations, Performances, Policies
- **When and where?**
 - In tutorial or lab sessions
 - Office hours
 - Informal, impromptu meetings



Class Organization

Supporting materials

handouts (pertinent and easy to follow)

Readings ,charts (explain clearly)

Visual aids (use effectively)

Diagrams/equations/exercises (written clearly on board)

Organization

Introduction

Identify and explain learning objectives

Relate content to previous lesson/future lessons

Repeat key points

Effective transitions

Logical progression of concepts

Use time effectively: pace lesson

Conclude and Review

Identify future goals



Questions & “I don’t know”

When you are asking:

- What is the purpose of the question?
- What is the expected answer?
- Give them time to reflect and respond

When you are answering:

- Pause, reflect & then answer
- Paraphrase – answer the question they ask



Questions & “I don’t know”



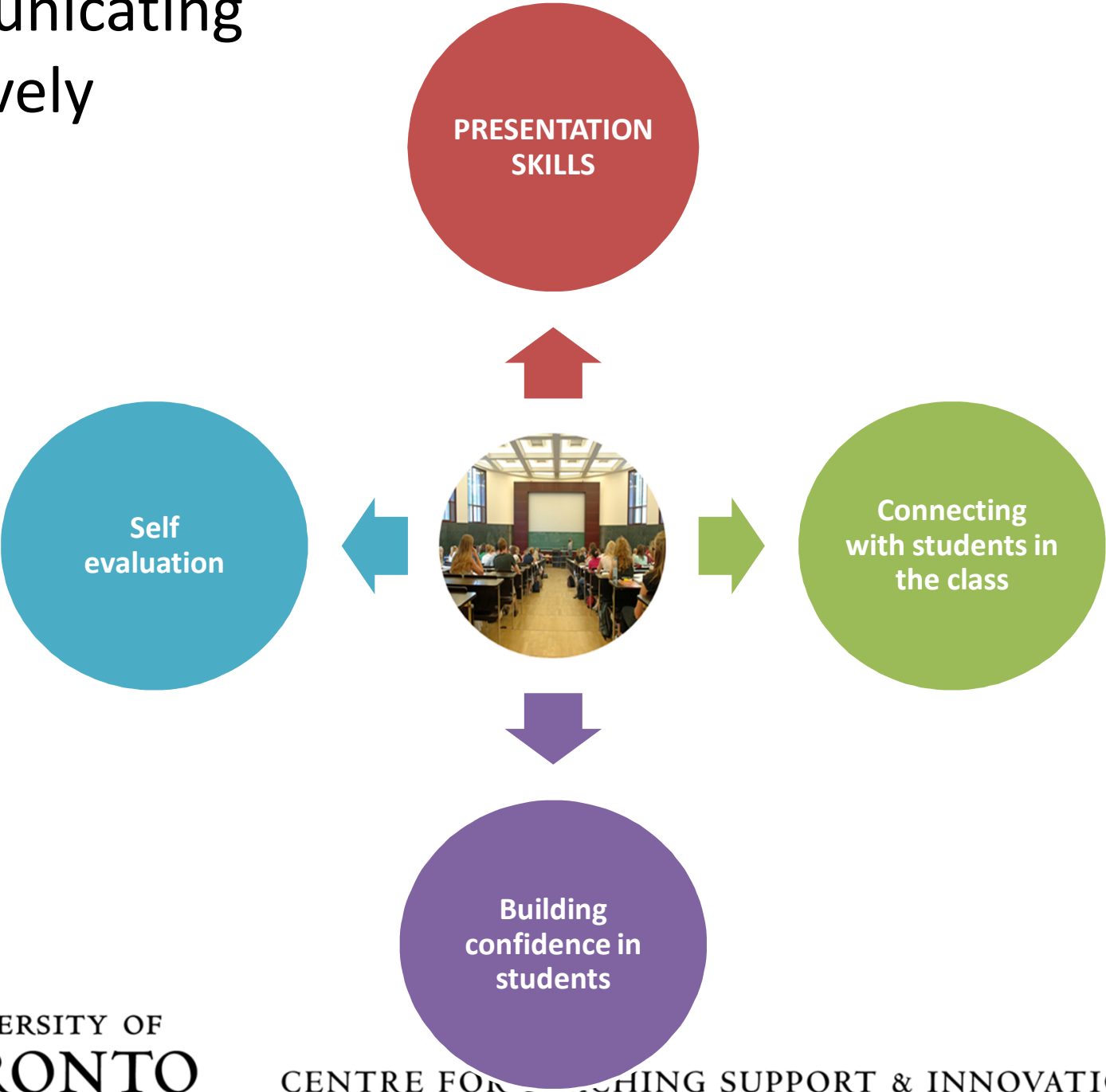
I don't know
I don't remember
Hmm..I hadn't thought about
that
Let me think about that
Wow. That's a good question
Does anyone know the
answer?



I will find out for you
I will email you the answer
I will post the answer on
the website
Try checking this book
We better ask the Professor



Communicating effectively





Communicating effectively

- Graffiti



- On a piece of paper, write down the elements required to communicate effectively for one of the following points
- You have 5 minutes to discuss
- Share your ideas with others



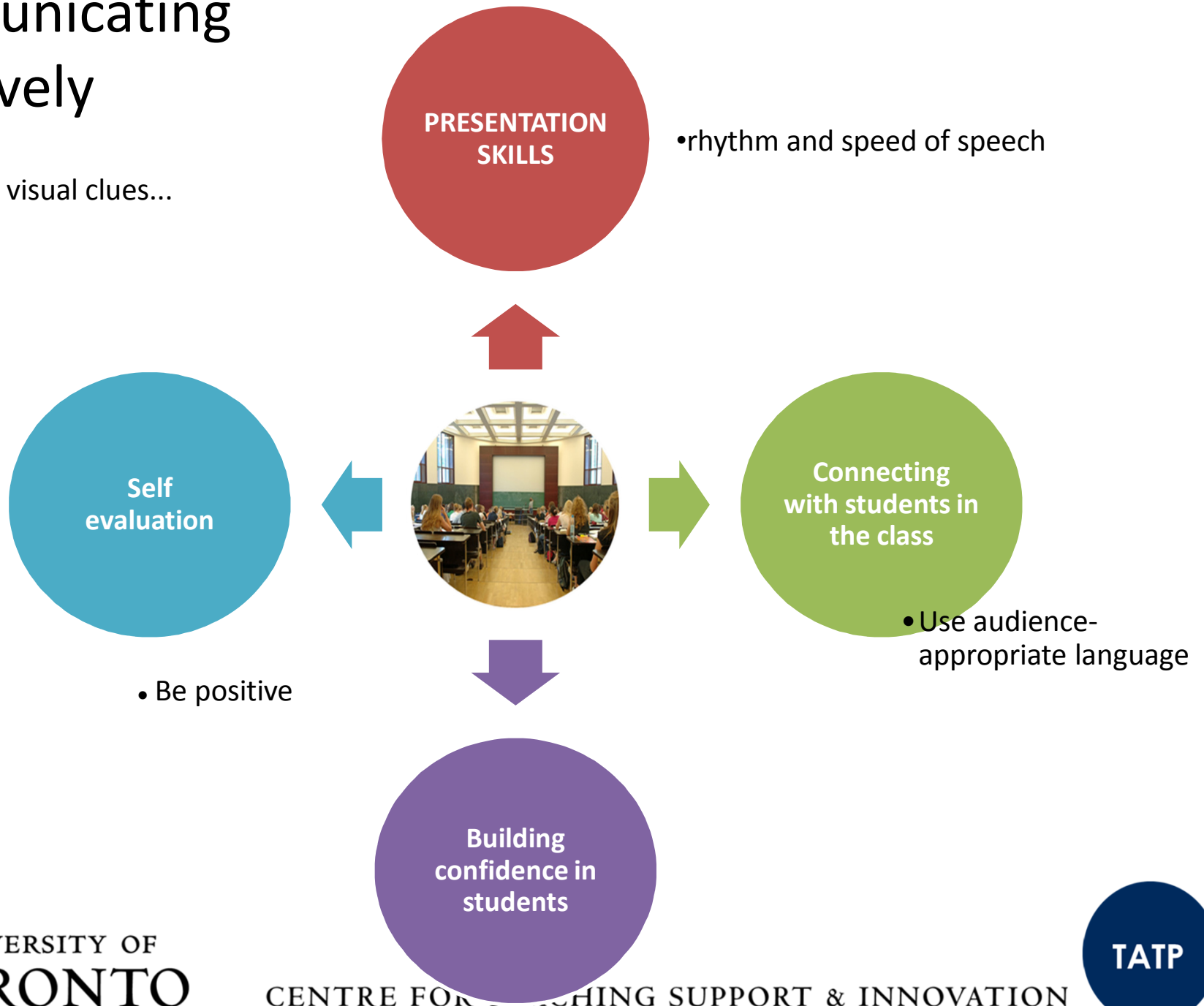
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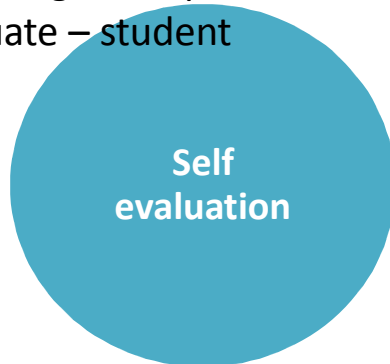
Communicating effectively

- Watch for visual clues... respond...



Communicating effectively

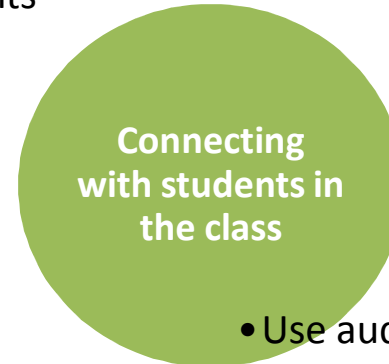
- Watch for visual clues... respond...
- Listening – The other half of communication!
- Informal progress report
- Self-evaluate – student reflection



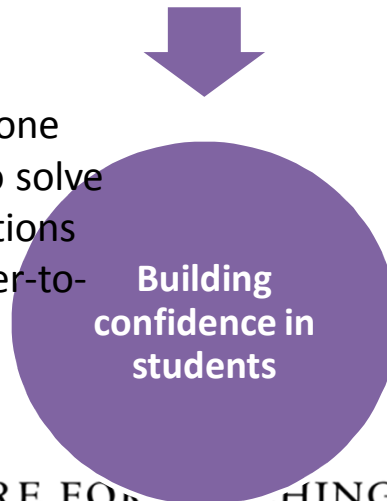
- Be positive
- Reinforce jobs well done
- Encourage student to solve problem/answer questions
- Encourage group/peer-to-peer help



- rhythm and speed of speech
- voice modulation and articulation
- enthusiasm
- effective use of gestures
- emphasized important points



- Use audience-appropriate language
- Remember about the diversity of the class
- Actively encourage student questions
- Responds to confusing (or wrong) student



Policies overview

Your responsibilities to the University

<http://www.teaching.utoronto.ca/gsta/training/ta-toolkit/essential-policies.htm>



Safeguarding the learning environment

www.teaching.utoronto.ca/gsta/training/tatoolkit/essential-policies.htm



Policies:

- Code of Student Conduct
- Ontario Human Rights Code
- Policy on Sexual Harassment
- Policy on Appropriate Use of Information Technology

Where to go and what to do:

- **Campus police: (416) 978-2222**
- **Student crisis response: (416) 946-7111**
- Equity offices on campus: Community Safety; Anti-racism and Cultural Diversity; Sexual and Gender Diversity; Sexual Harassment Office
- Guide on online harassment – “Enough!”



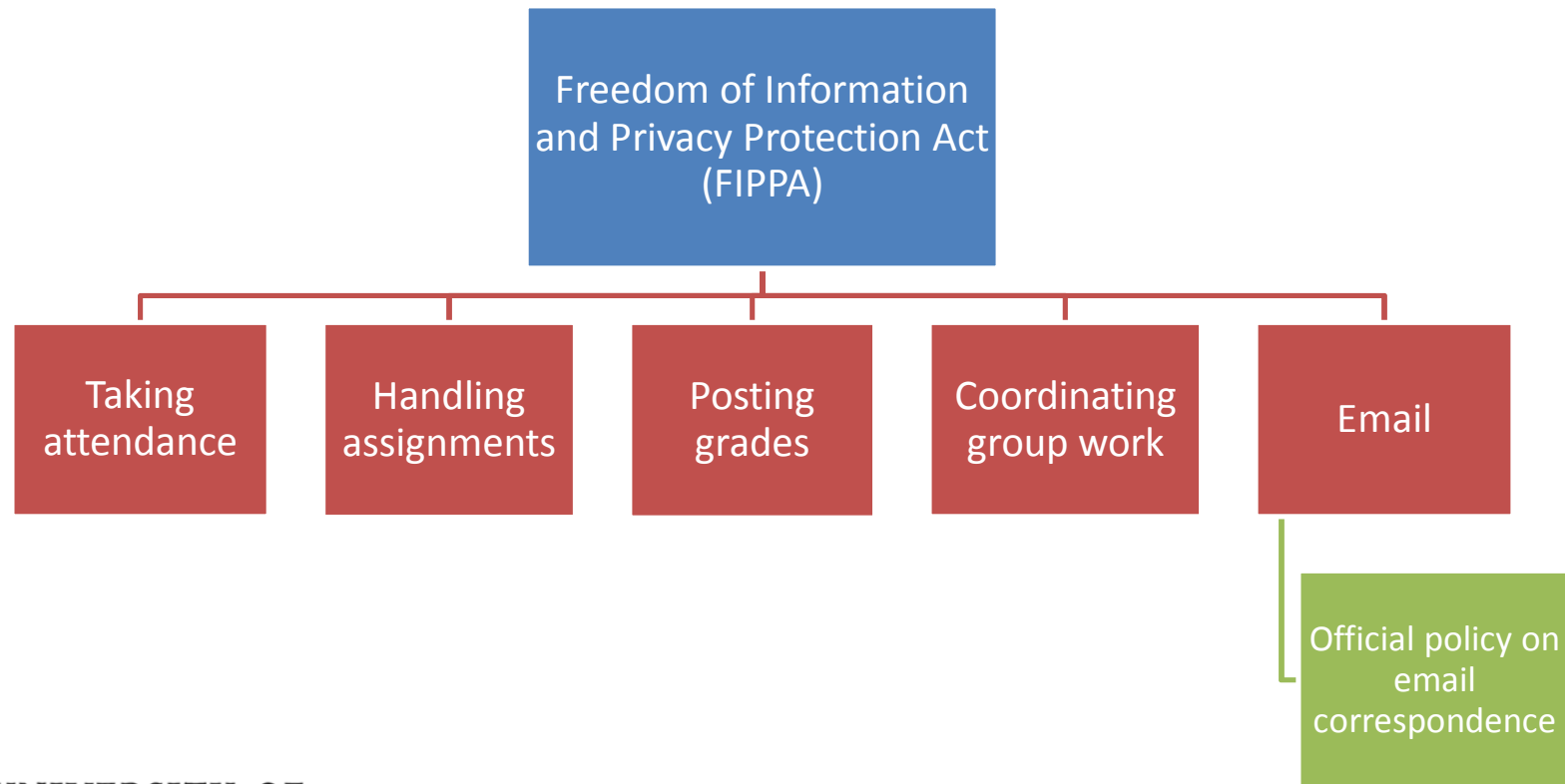
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Respecting confidentiality

What if...A group assignment is due next week and a student asks you for the e-mail of a member of their group who was not in class that day?



Learning Portal

The screenshot shows the University of Toronto Learning Portal interface. At the top, the University of Toronto logo is on the left, and the user's name 'Michelle Hoffman' and navigation links 'My Places', 'Home', 'Help', and 'Logout' are on the right. Below the header, there are tabs for 'My Page', 'Community', and 'Content'. The main content area is titled 'Tools' and contains several utility links: Announcements, Blackboard Help, Blogs, Calendar, Collaboration, Journals, Library Resources, My Grades, Portfolios Homepage, and Roster. Each link includes a description and a 'Hide Link' button. On the left side, there is a navigation menu with a tree view showing the current course path: 'His Math After 1700/Hist Math After 1700/Hist Math After 1700.Hist Math After 1700 Winter-2010-HPS391H1-S-Winter-2010-MAT391H1-S-LEC'. Below the menu is a 'COURSE MANAGEMENT' section with links for 'Control Panel', 'Content', and 'Course Tools'. A digital clock in the bottom right corner of the portal displays '0:05:00'.



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Avoiding conflict of interest

<http://www.teaching.utoronto.ca/gsta/training/ta-toolkit/essential-policies.htm>

Provost statement on conflict of interest and close personal relationships

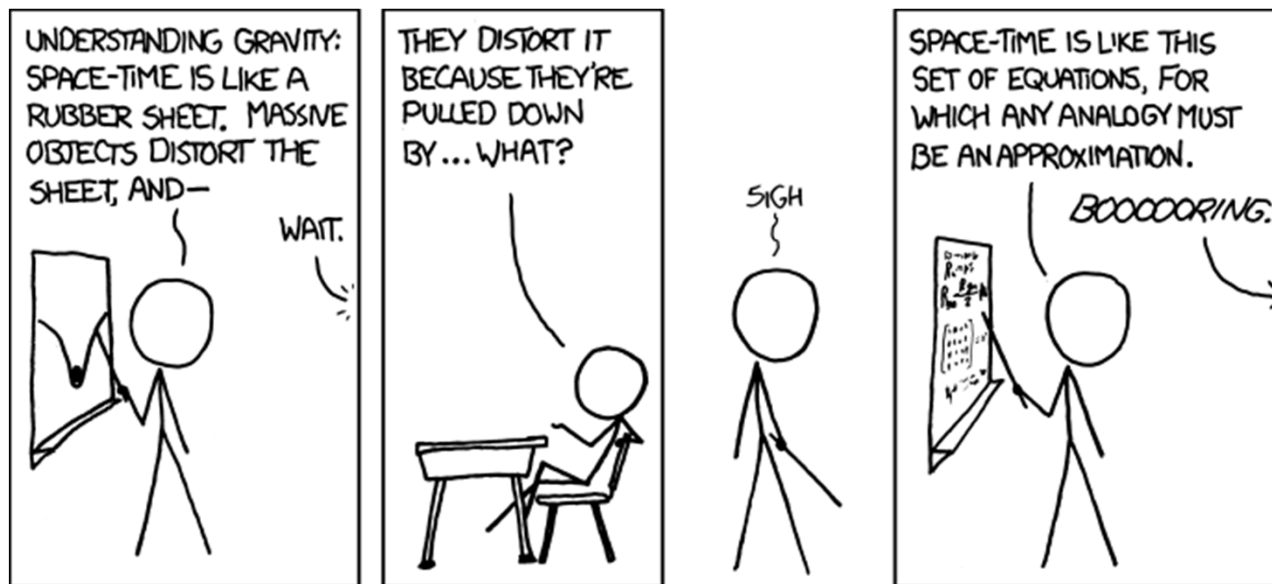
- You MUST disclose it immediately to the CI.
- You can't be responsible for grading the student's work.
- You open yourself up to allegations of sexual harassment.

What if...One day, you're alone at office hours and a student offers to take you out for a drink Saturday night?

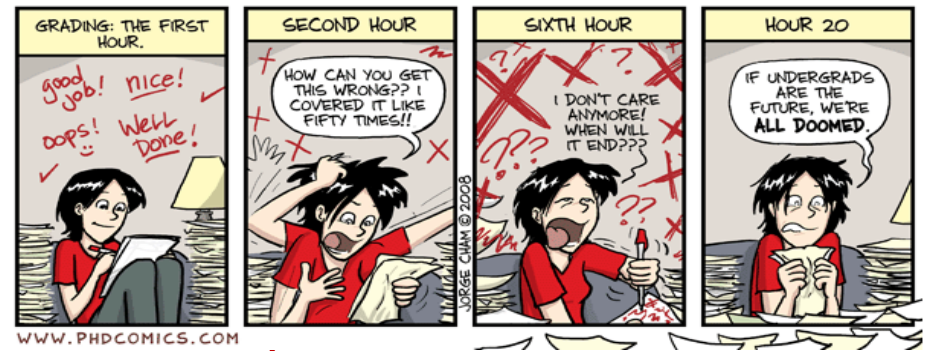


General strategies for prevention

- Be prepared
- Be organized
- Define expectations, establish policies and ground rules
- Be firm, consistent and honest
- Build rapport
- Show enthusiasm and engage students
- Establish a safe and comfortable learning environment



The grading process



Before

- Communicate
 - Instructor
 - Students
 - Fellow TAs
- Work through the assignment
- Formulate detailed marking scheme
- Read few papers (top & bottom of the stack) and revise marking scheme

During

- Mark one question or section at a time
- Reserve final grade until all assignments are marked
- Cover names or numbers
- Annotate rubric as you progress
- Provide valuable written feedback
- Comments should be consistent with grade
- Make a list of common errors

After

- Ensure grades correspond to a fair ranking
- Record raw scores
- Return assignments to the students individually
- Return assignments when its least disruptive
- Formulate policy for re-grading
- Set up a time to deal with grading disputes



Grading Activity



Designed by
Jason Harlow



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Lab Assignment: Diving Eye-dropper

- What is Archimedes' Principle?

[2 Marks]

- Follow the instructions given to build and test the diving eye-dropper. Describe the building process: What the dropper does when you squeeze the bottle and why?

[8 Marks]



Tasks

- 1) Read the assignment and solutions
(5-6 min)
- 2) Discuss with group or reflect in individual
(2-3 mins)
- 3) Assign final marks
- 4) Return handouts



Suggested Marking Scheme

What is Archimedes' Principle?

- The buoyancy force on an object immersed in a fluid is equal to the weight of the displaced fluid [2 Marks]

Follow the instructions given to build and test the diving eye-dropper. Describe the building process: What the dropper does when you squeeze the bottle and why?

- Procedure: [2 Marks]
 - Filled the bottle with water
 - Adjusted size of bubble in dropper until dropper just floats
 - Tightened lid
- Observation: [3Marks]
 - When bottle is squeezed, diver sinks
 - When pressure is released, diver floats
- Reason: [3 Marks]
 - Dropper is held up by buoyancy provided by displaced water by bubble. When bottle is squeezed, bubble shrinks, and buoyancy decreases. Then dropper sinks.



Grading



Responsibilities

- Be fair, consistent and effective
- Provide feedback (detailed, specific, constructive)
- Keep records
- Vigilant to and report Academic Integrity issues

And...

- Have a clear head
- Avoid marathons
- Mark in a supportive environment
- Write clearly on scripts
- Cover names



Upholding Academic Integrity

Code of Behaviour on Academic Matters



<http://www.utoronto.ca/academicintegrity/academicoffenses.html>

<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>

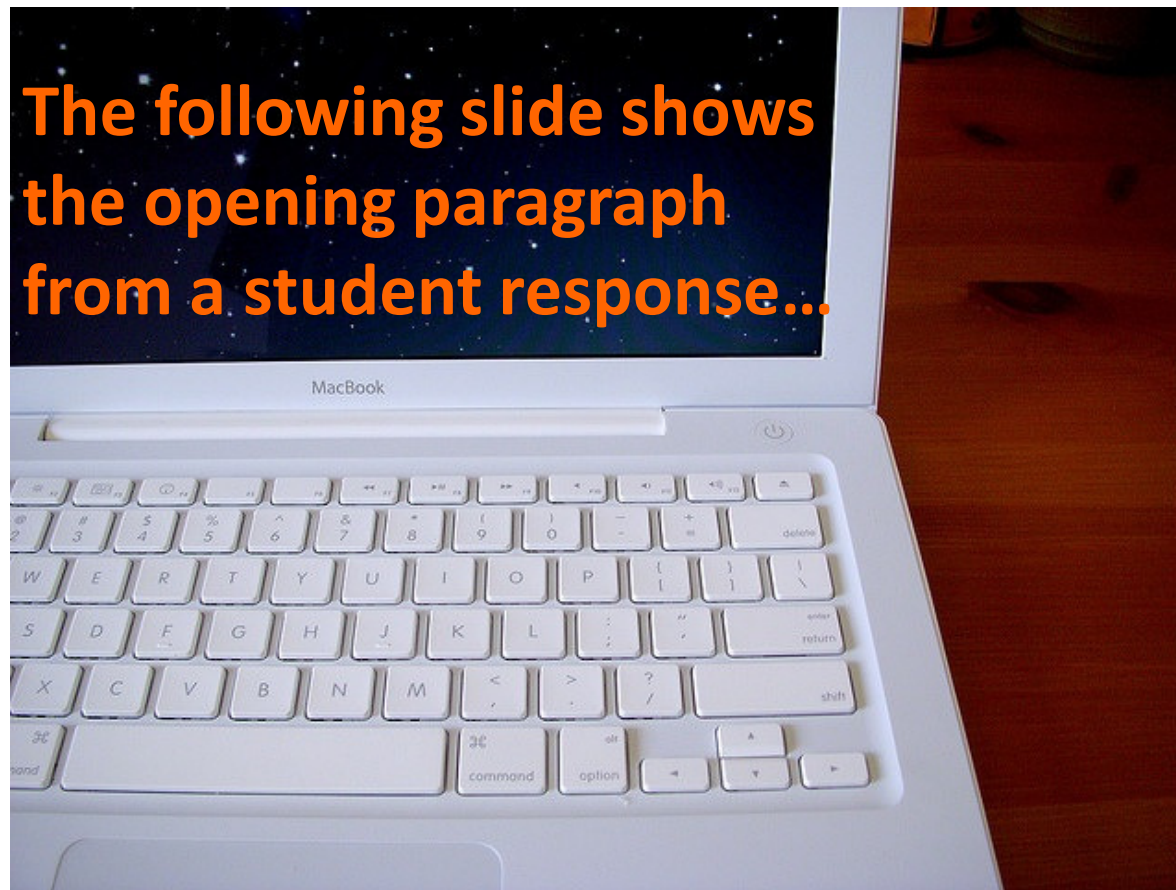


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You are reading over short answer questions for a 1st year course assignment which must provide a definition of science.



1) **Science** is a systematic enterprise that builds and organizes **knowledge** in the form of testable explanations and predictions about the **universe**.^[1] In an older and closely related meaning, "science" refers to the body of reliable knowledge itself, of the type that can be logically and rationally explained.



Disclosure

1) **Science** is a systematic enterprise that builds and organizes **knowledge** in the form of testable explanations and predictions about the **universe**.^[1] In an older and closely related meaning, "science" refers to the body of reliable knowledge itself, of the type that can be logically and rationally explained.

The mock student work defining science contained non-cited work copied from the following sources:

- <http://en.wikipedia.org/wiki/Science>





Some academic
integrity red
flags

Identical
mistakes by
students

Change in level
or quality of
writing

Change in font
(size, colour,
style etc.)



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How to stop plagiarism?

- Educate
 - Set clear guidelines
 - Outline expectations
 - Citation training
- Improve evaluation design
- Careful grading of scripts
- Make known the consequences of the act



Upholding academic integrity

<http://www.teaching.utoronto.ca/gsta/training/ta-toolkit/essential-policies.htm>

Report it to
the CI

- NOT reporting is an offense of the Code!
- You may be asked to compile evidence.
- LOG YOUR HOURS.

Retain the
assignment

- Don't assign a grade.
- Don't return the assignment(s).

Exercise
caution with
the student

- Don't accuse the student of plagiarism.
- Don't impose penalties.
- Don't advise the student to withdraw.



Disgruntled student

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<http://www.flickr.com/photos/lara604/2369412952/sizes/l/in/photostream/>

Disgruntled student

Straight after the tutorial, Maya comes, asking you about her grade on problem #3 in the assignment.

She complains that 5 points (score = 5/10) were taken off, even though she made such a small mistake.

You try to explain that her reasoning is wrong & that there is a fundamental error in her logic. The student responds aggressively, saying, “This is completely unfair & such a small part of my assignment! Your marking scheme doesn't make any sense. You're the worst TA!!”

Disruptive behaviour

*Behaviour that hampers **teaching or learning.***

Stay calm.

Take up in office hours.

Refer to Course Instructor.

Enforce ground rules.



Be consistent.

Keep a written record.

Campus Police:
(416) 978-2222

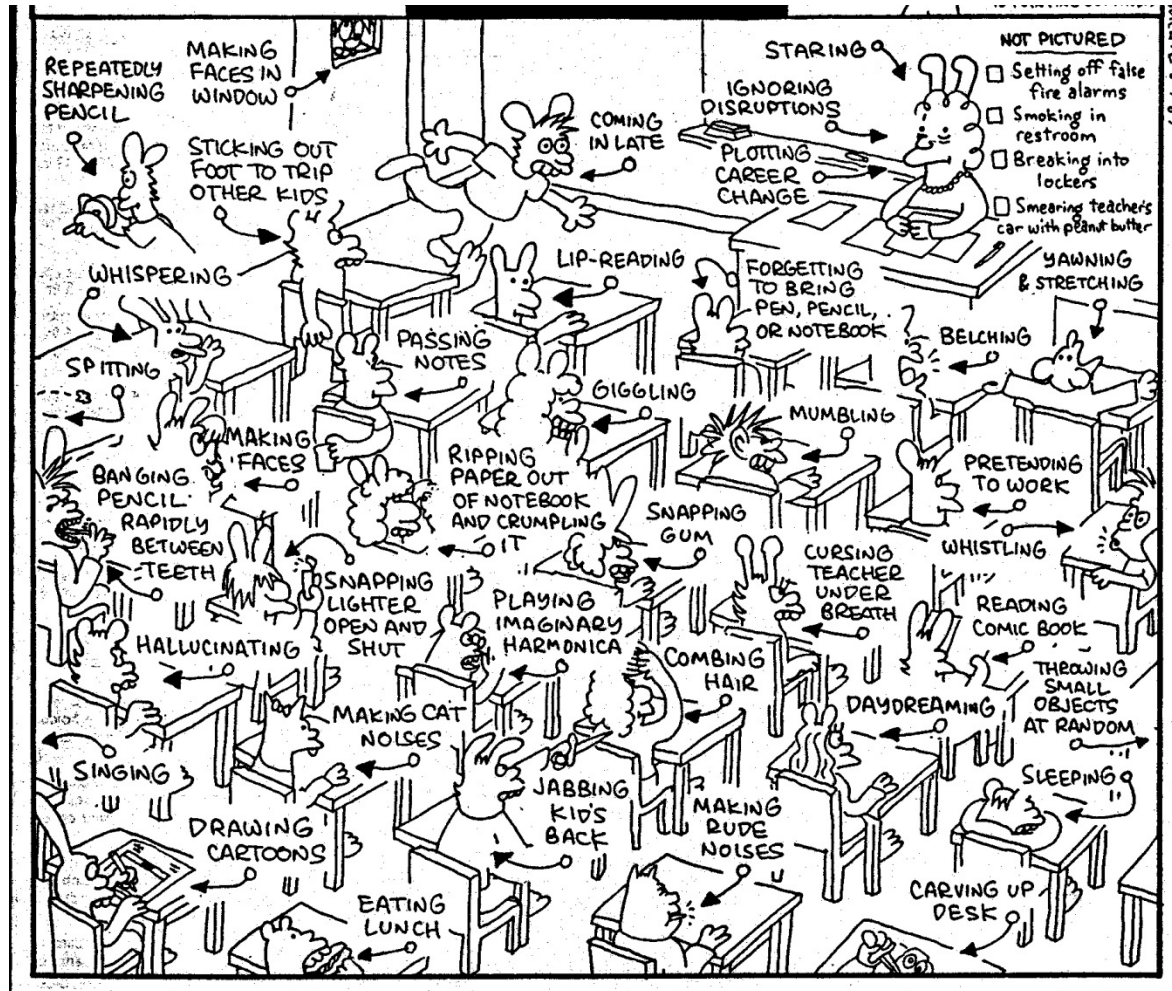


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Managing students and the classroom

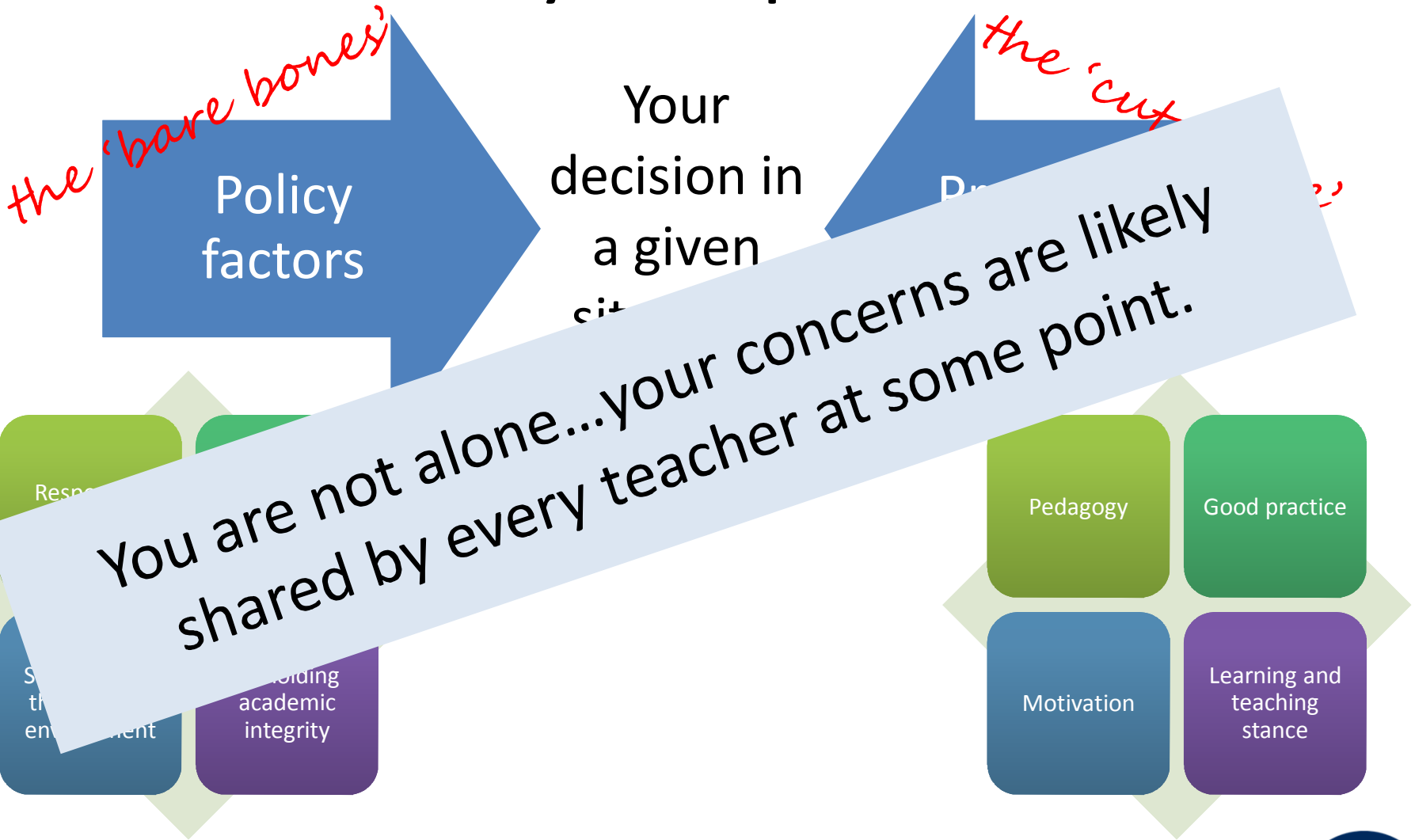


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Policy and professionalism



Scenarios

The following are scenarios that you may face in your TA setting.

As a group, decide:



1. What the main issue(s) is/are for the scenario?
2. How will you handle the situation?
3. What could you do to prevent the situation from happening in the future?



1. More than half of your students have not done the assigned work for the class.

2. Some students in your class sit in the back row and check Facebook constantly.

3. One day, you're alone at office hours and a student offers to take you out for a drink Saturday night.

4. After class, some students are discussing if one of their classmates is gay. The students ask your opinion on the matter.

5. A group assignment is due the following week. A student asks you for the e-mail of a member of their group who was not in class that day.

1. More than half of your students have not done the assigned work for the class.

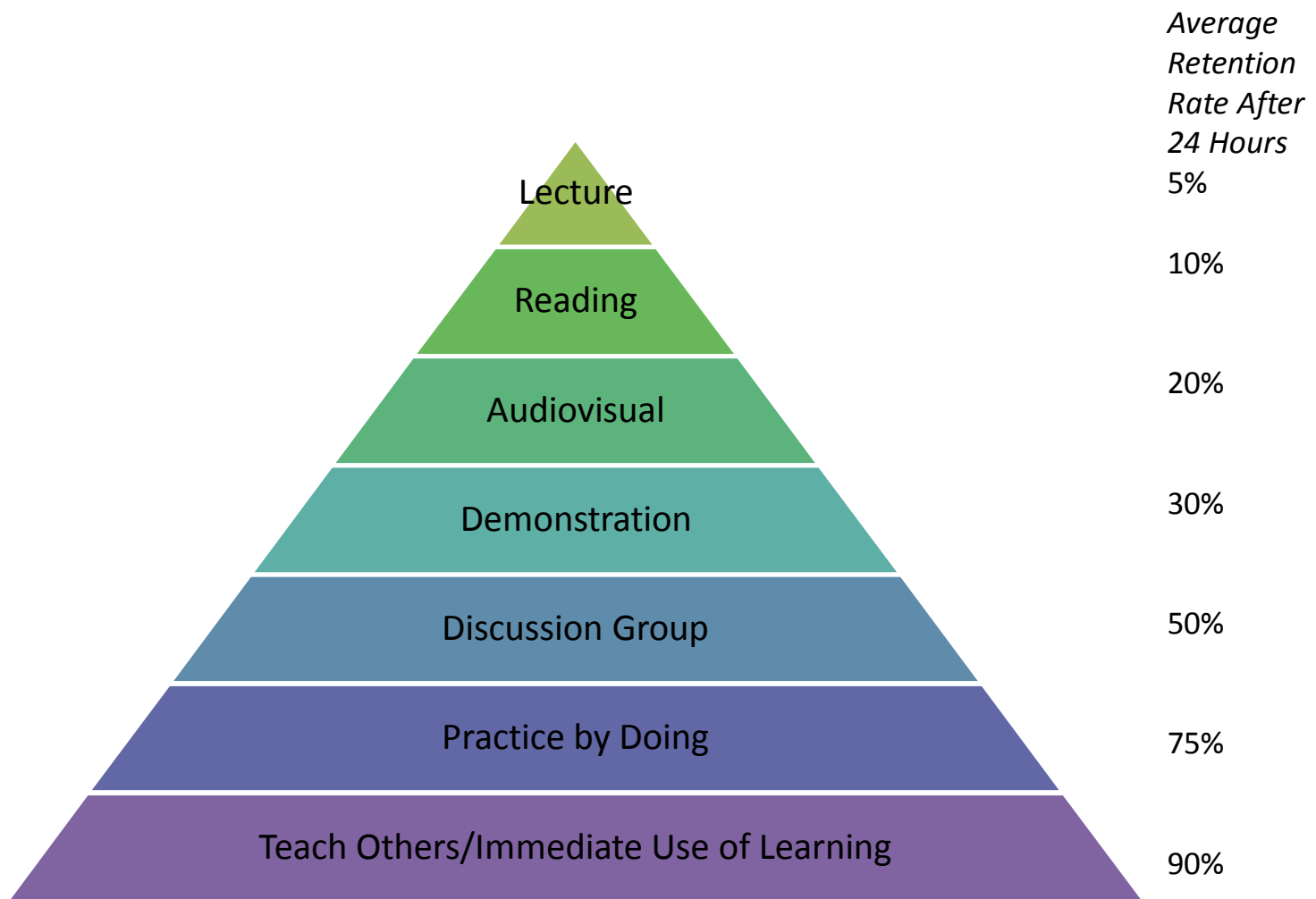
2. Some students in your class sit in the back row and check Facebook constantly.



Teaching strategies

- Four corners
- Graffiti
- Case studies/scenarios





The diagram shows the average percentage of retention of material after 24 hours for each of the instruction methods. Note that the percentages are not additive.

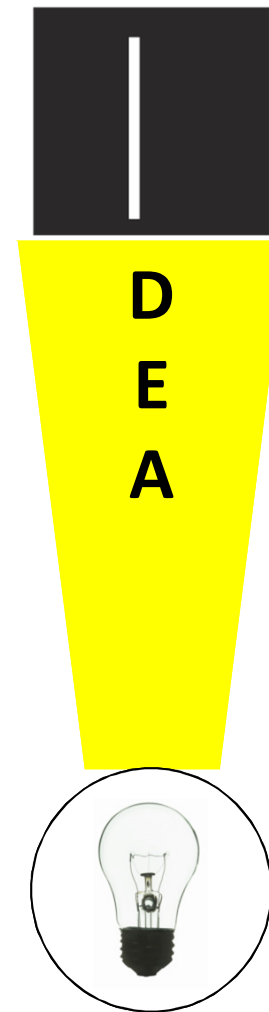
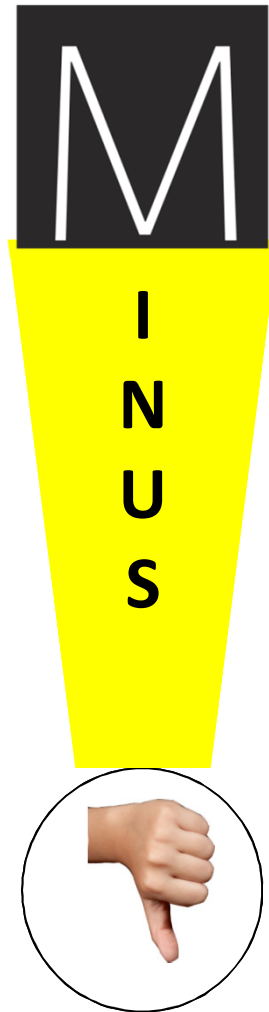
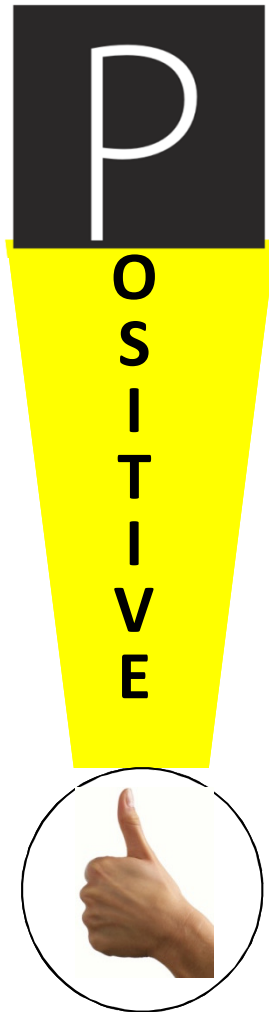
Source: Adapted from National Training Laboratories of Bethel and NTL Institute of Alexandria, VA, cited in David Sousa (2006), *How the Brain Learns*, 3rd ed. California: Corwin Press.



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*Edward de Bono, 1974,
CoRT Thinking Programme*



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Wrap Up

- Needs assessment
- Evaluations



Further Resources

Academic Support

- Academic Success Centre
- English Language Support
- Student Retention
- Writing Centres
- Math Aid Centres

Equity and Diversity

- Accessibility Services
- Centre for International Experience
- Sexual & Gender Diversity Office

Safety

- Campus Police
- Walksafer and Working Alone Program
- Student Crisis Response Program

Health and Wellness

- Counselling and Psychological Service (CAPS)
- Health Services



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<http://www.teaching.utoronto.ca>

services.ta@utoronto.ca