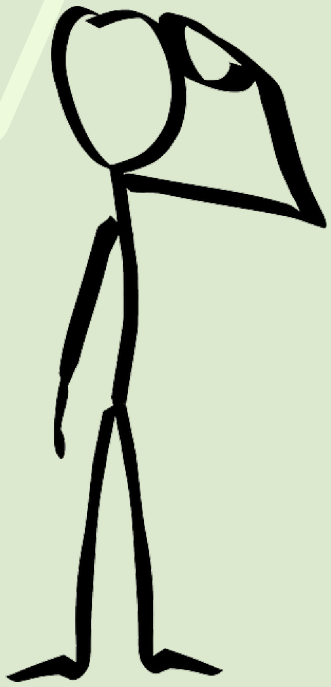
EC1101E:
Introduction to Economic Analysis

Why should I study economics?



Career Options

- Business, banking, finance.
- Consulting – economic, management, business.
- Public sector – MAS, MOF, MOM, MND, MTI, *etc.*
- Public policy research institutes (think tanks).
- International organizations – IMF, World Bank, Asian Development Bank, *etc.*
- Academia.

http://www.aeaweb.org/students/Careers.php

"When I was in college, I majored in political science. But if I were going through college today, I'd major in economics. It possesses a rigor that other fields in the social sciences don't – and often greater relevance as well. That's why economists are shaping national debates about everything from health care to poverty, while political scientists often seem increasingly theoretical and irrelevant. Economists are successful imperialists of other disciplines because they have better tools . . . economists have used rigorous statistical methods to answer basic questions."

Nicholas Kristof
American journalist, author, op-ed columnist, and winner of two Pulitzer Prizes

Example 1

Does having a graduate degree make one a better teacher?

Is money better spent on smaller classes or on better teachers?

Example 1

Does having a graduate degree make one a better teacher?

Probably not.

Is money better spent on smaller classes or on better teachers?

Probably better teachers.

Example 2

How can we most effectively break cycles of poverty

- By building schools
- By subsidizing school uniforms
- By deworming

EXAMPLE 2

How can we most effectively break cycles of poverty

- By building schools > $100.00
- By subsidizing school uniforms > $100.00
- By deworming $ 3.50

EXAMPLE 3

What is the most cost-effective way of preventing HIV transmission in Africa?

- Condoms
- Abstinence-only programs
- An initiative to warn teenage girls against “sugar daddies”

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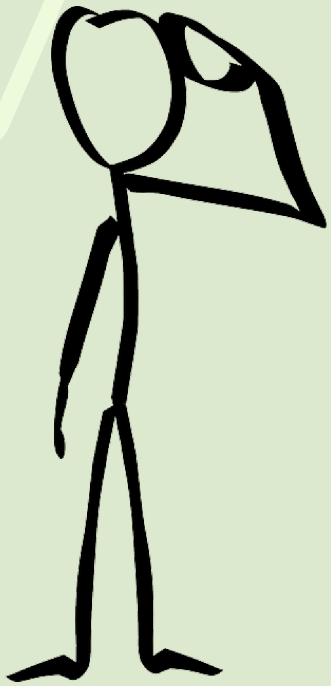
  < $1.00 per girl reached

What will we be learning in this class?



EC1101E

- Dr Ong will teach Microeconomics in the first 6 weeks.
- Mr Chan will teach Macroeconomics in the last 6 weeks.

Microeconomics

- What is economics?
- Choice under scarcity:
  - Cost-benefit analysis
  - Opportunity cost
  - Gains from trade

Microeconomics

- How do **markets work?**
  - Demand and supply
  - How do we react when Price changes?
  - What are the gains from participating in a market?

- What happens when **the government intervenes in markets?**
  - Price controls
  - Taxes and subsidies

Microeconomics

- When do **markets fail?**
  - Externalities
  - Public goods and common resources

- What are the different types of **market structure?**
  - Perfect competition
  - Monopoly
  - Monopolistic competition
  - Oligopoly

Macroeconomics

- How are **macro indicators** measured and used?
  - Production, inflation, employment and unemployment
  - Problems with measurement and use

- How do **economies grow?**
  - Institutions
  - Inputs and technology
  - Government policies

Macroeconomics

- Why do economies fall into **recession**? What can **governments** do?
  - Connections between spending and output
  - The expenditure multiplier
  - Counter-cyclical fiscal policy

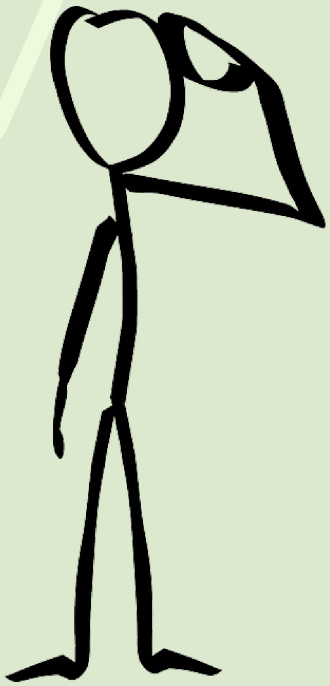
- What is **money** and **banking**?
  - Money
  - Banking and deposit creation
  - Bank runs and the need for regulation

Macroeconomics

- Why are **central banks** important?
  - Financial crisis management
  - Counter-cyclical monetary policy

- What determines **exchange rates**?
  - Hot money and currency crises
  - Fixed vs. flexible exchange rates
  - Exchange rates and the trade balance

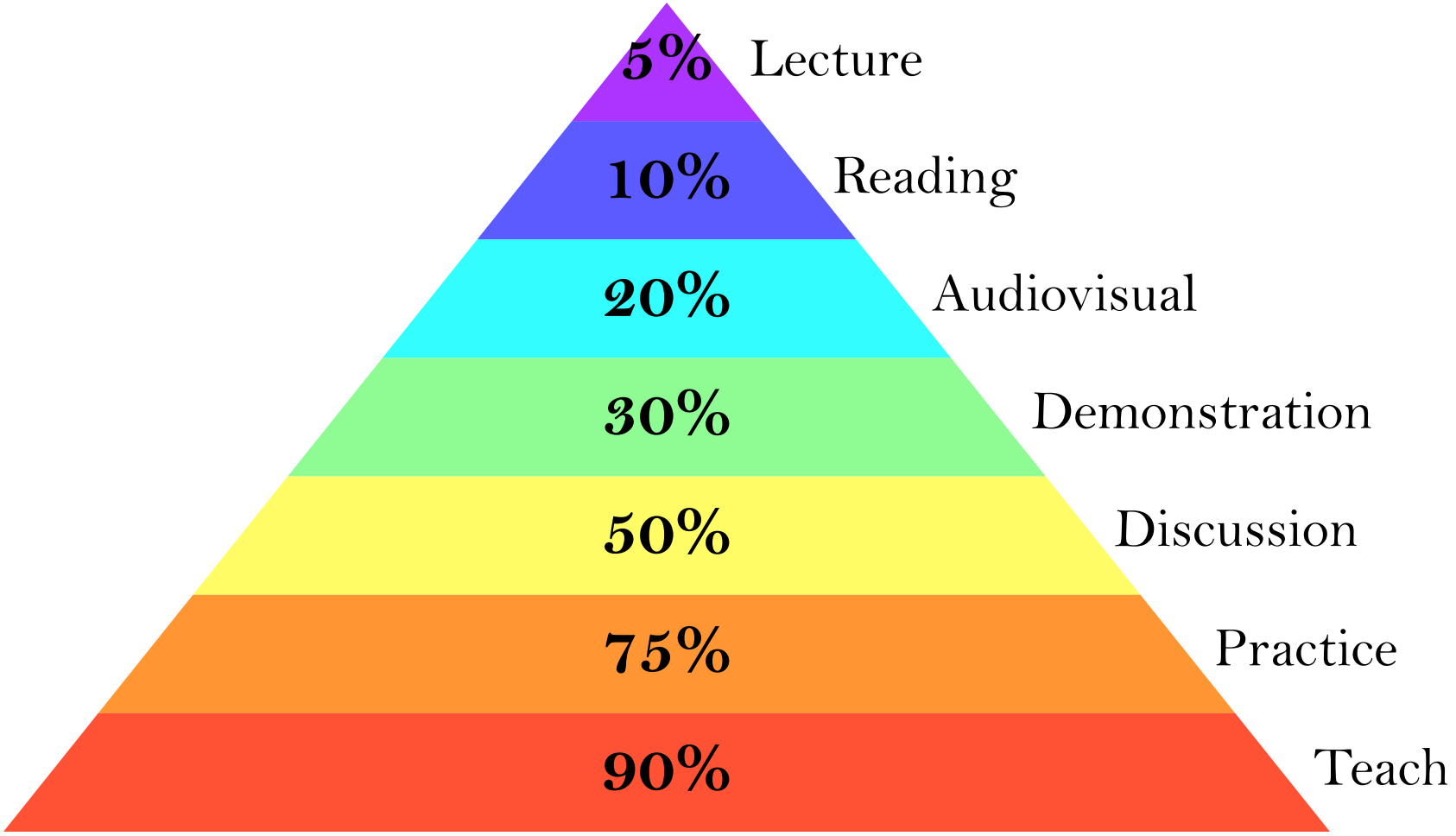
How will we be learning in this class?



"We are more traditionally used to sitting back and soaking information."

– Mid-semester Survey, Spring 2015

Average Student Retention Rates



Source: National Training Laboratories, Bethel, Maine

Learning

- Lecture Notes *LumiNUS => Files*
- Pre-Lecture Videos *LumiNUS => Multimedia*
  - *Available at 12:00 p.m. Monday, a week before the in-person lecture.*
  - *This class is designed based on how we learn. As you watch the Lecture Videos, take notes and work on the Active Learning Exercises and Test Yourself Summaries in the Lecture Notes. Some of the Active Learning Exercises will be covered in the videos; the rest will be covered during the live Zoom class.*

Learning

- Readings *LumiNUS => Files*
  - *The textbook serves as a useful reference.*
  - *Excerpts from Tim Harford's books and articles from newspapers and magazines such as The Economist will help you see how economics explains (or does not explain) what happens in the real world.*

Reinforcing Learning

- In-Person Lecture *Monday/Tuesday*
  - *We will go through the Active Learning Exercises and Test Yourself Summaries in the Lecture Notes, as well as the Quiz questions with the highest error rates (after the Quiz closes). Then we will do a Q&A using PollEverywhere.*

- Quiz *LumiNUS => Quiz*

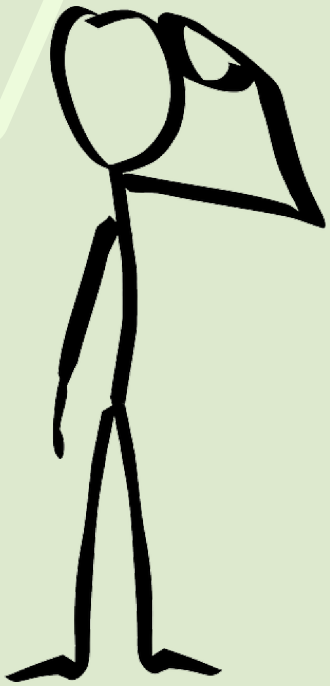
Reinforcing Learning

- Problem Sets *LumiNUS => Files*
  - *Submit your problem sets in groups of 2–3 via LumiNUS => Files by 11:59 p.m. two days before your tutorial. Problem Sets are scored on the basis of effort, not accuracy. Plagiarism will not be condoned.*

- Tutorial *Monday–Friday*
  - *Tutorial scores are based on attendance and participation. What matters is effort, not accuracy.*
  - *Be prepared to verbalize your understanding of the material. It's okay if you don't have the perfect explanation – we're here to learn!*

What's with all these quizzes?

Why do you keep asking us questions?



Why Quizzes and Questions?

- A study compared the benefits of reviewing versus quizzing.
  - Both groups were presented the exact same material in class.
  - Group 1 was subsequently **quizzed** three times.
  - Group 2 subsequently **reviewed** the material three times.

  - Group 1 earned an average grade of A–.
  - Group 2 earned an average grade of C+.

Why Quizzes and Questions?

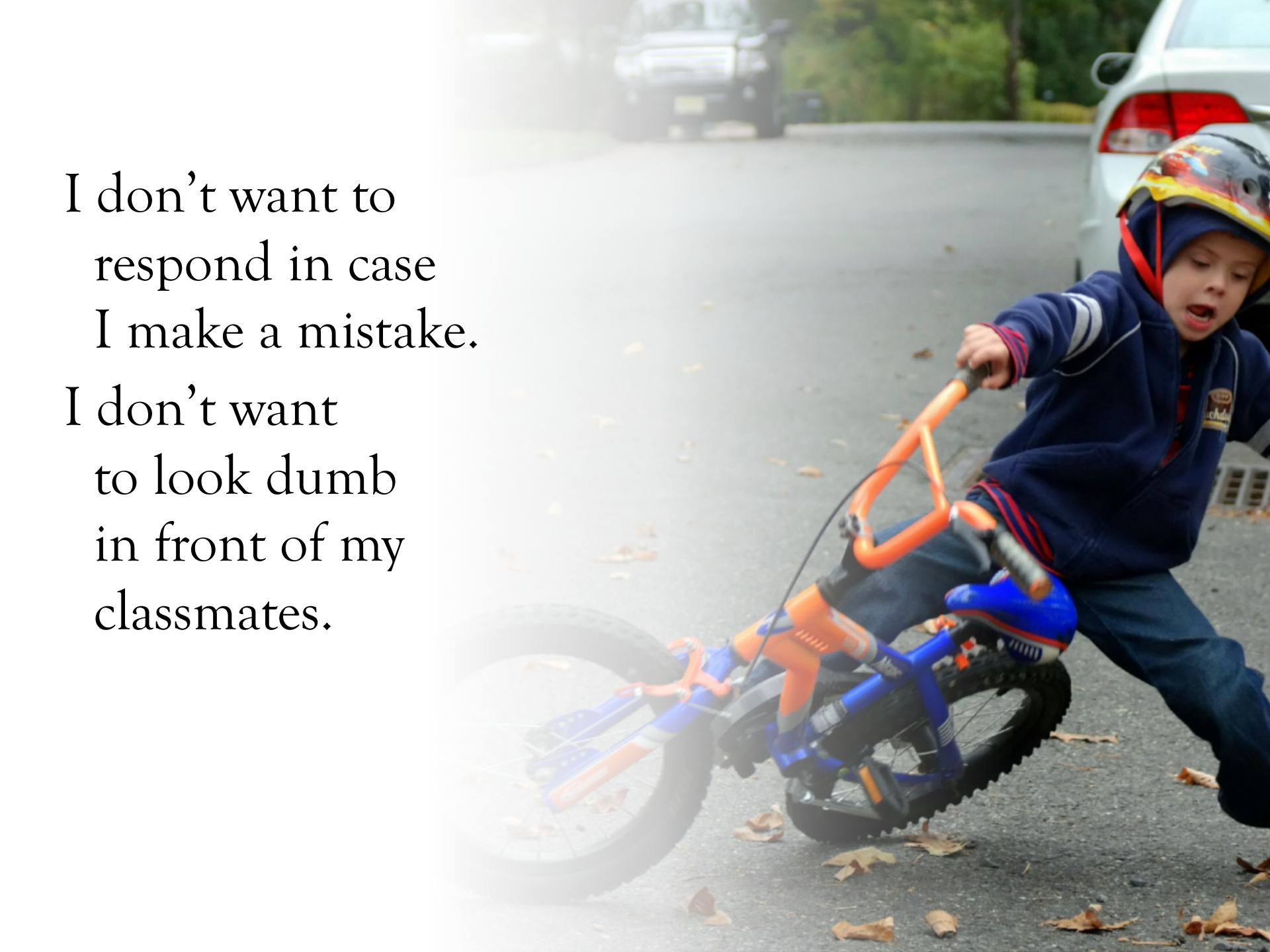
- This isn't just a matter of teaching students to be better test takers.
- When students are tested, they are required to retrieve knowledge from memory, **enhancing learning** and **improving retention**.
- Tests serve students best when:
  - they're integrated into the regular business of learning
  - the stakes are not make-or-break, as in standardized testing
- That means testing new learning within the context of **regular classes** and **study routines**.
- Caveat: Blindly practicing questions without achieving true understanding will not help you on exams.

"Asking us questions provokes us to think and gets us to understand the concepts better."

– Mid-semester Survey, Spring 2015

I don't want to
respond in case
I make a mistake.

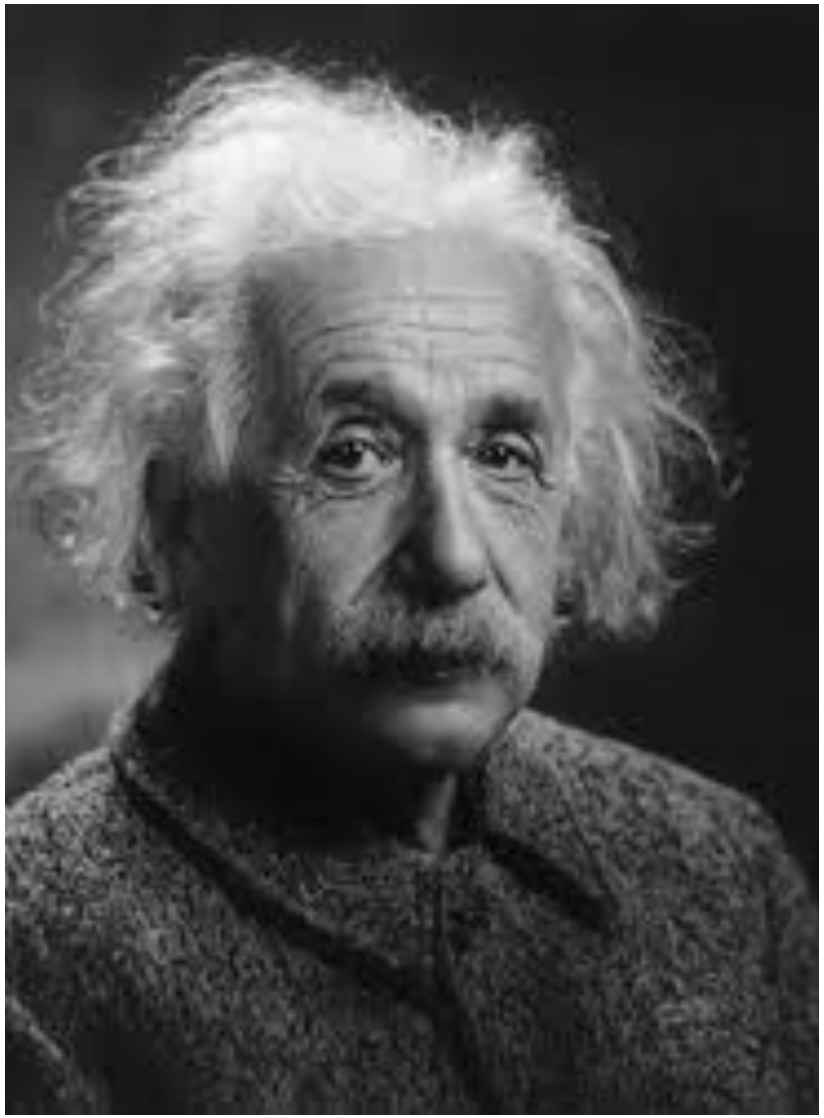
I don't want
to look dumb
in front of my
classmates.



Who has
NEVER
made a mistake?

"Anyone who has never made a mistake has never tried anything new."

Albert Einstein

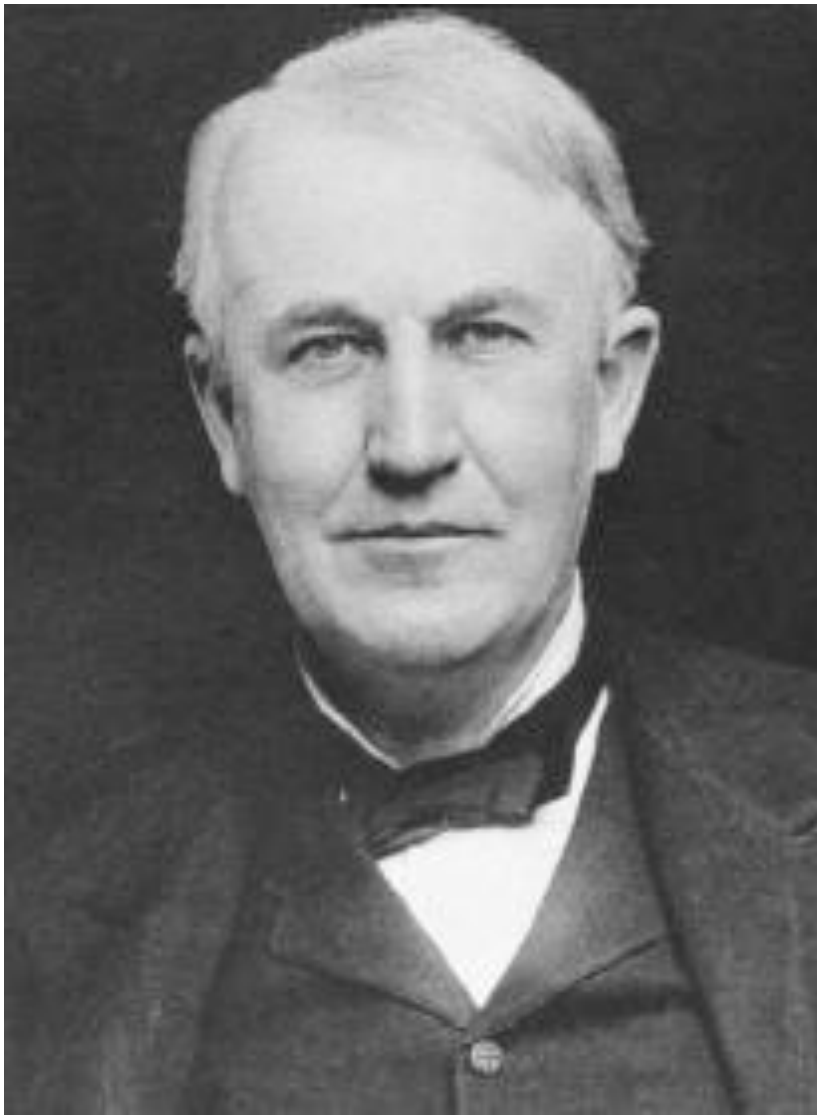


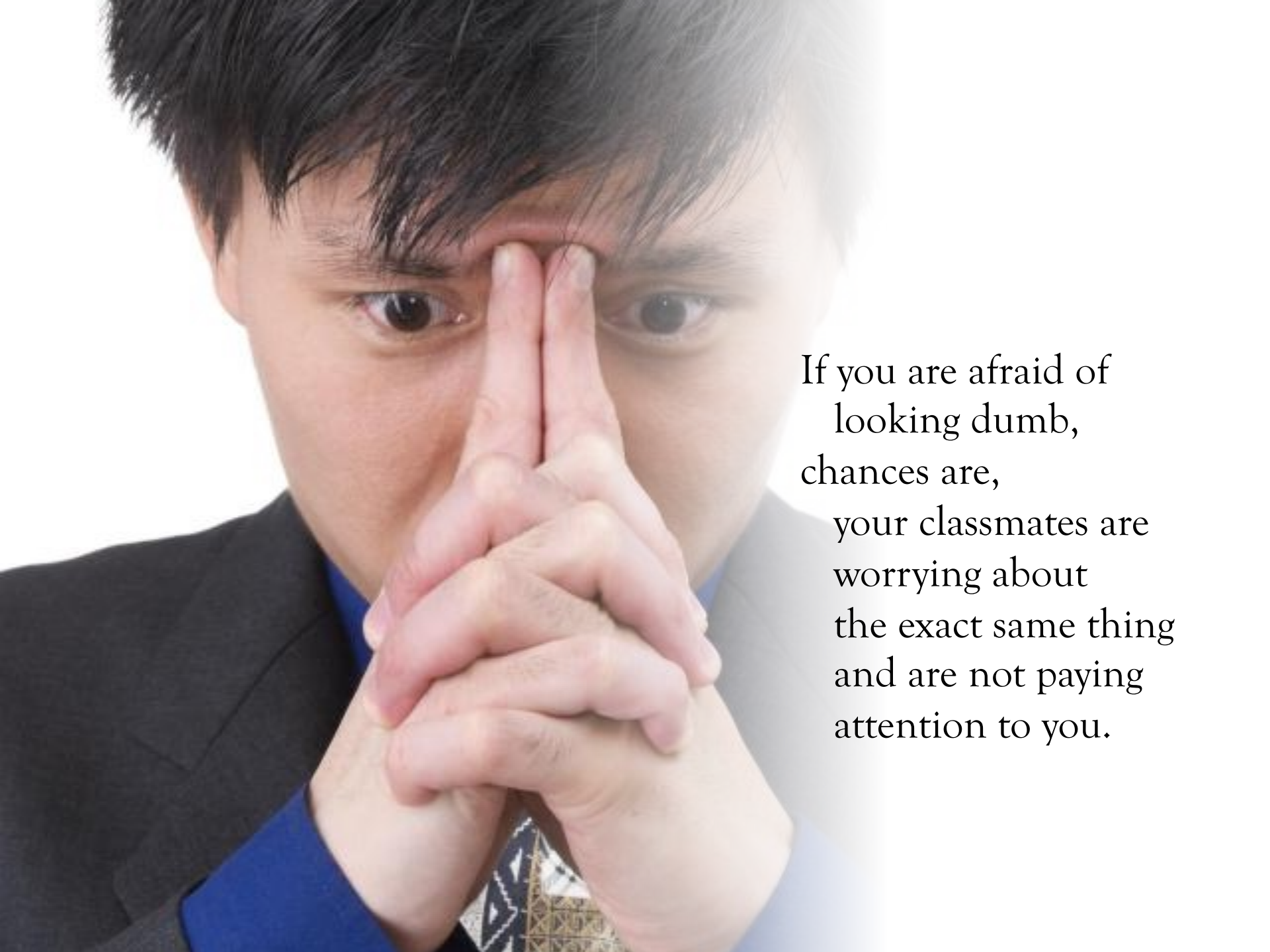
All of us,
myself included,
are going to
make mistakes
over the course
of the semester.


Making mistakes is
a constructive
part of learning
— not a sign of
failure
but a sign of
effort.

"I've not failed. I've just found 10,000 ways that won't work."

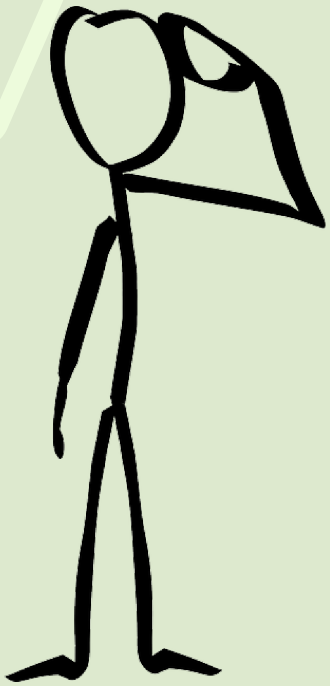
Thomas Edison





If you are afraid of
looking dumb,
chances are,
your classmates are
worrying about
the exact same thing
and are not paying
attention to you.

I can multitask while watching the videos or sitting in class, right?



Multitasking

- While many people say **multitasking** makes them more productive, research shows otherwise.
- Heavy multitaskers:
  - have more trouble **focusing** and **shutting out irrelevant information**
  - experience more **stress**
- Even after the multitasking ends, **fractured thinking** and **lack of focus** persist.

Multitasking

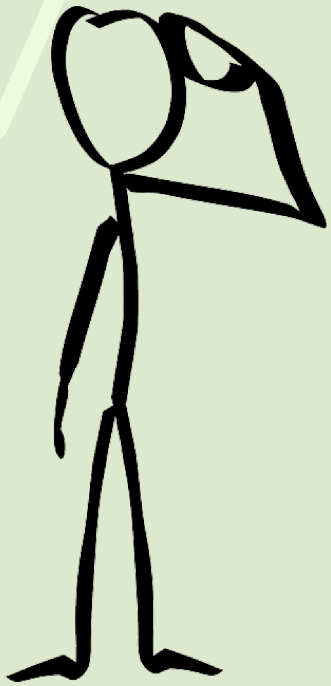
- You may feel like you're accomplishing more, but studies show that:
- Trying to focus on more than one thing causes a **40% drop in productivity.**
- While working, being distracted by incoming calls or emails **lowers a person's IQ by 10 points** – which is the equivalent of missing a night of sleep.

Multitasking

- The temptation to multitask is strong.
- For the sake of your **future self,** try to resist.
- If your attention is split while you are watching the pre-lecture videos or sitting in class, chances are, **nothing much is registering in your brain.**

What is the Grade-Free First Year?

How does it affect me?



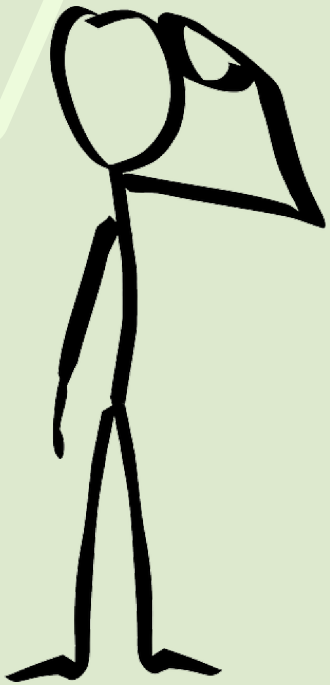
Grade-Free First Year

- When you get your grade at the end of the semester, you decide whether you want to:
  - **keep it** (and have it count towards your CAP), or
  - **drop it** (and have an *S/U* notation).
- Goals:
  - Remove the focus from exams and grades.
  - Think about (and hopefully enjoy) what you're learning.

Grade-Free First Year

- How hard should you work?
  - If you're happy with your grade, you get to keep it.
  - EC1101E is the foundation for the other Economics classes — the more effort you put in now, the easier you'll find the other classes.
- In general, it's not a good idea to *S/U* a module in your major. An "*S*" (in place of a grade) is a red flag.

What learning strategies can I pick up from the most successful students?



I would explain the concepts to myself out loud, and I would teach my peers whenever they needed help. Verbalising concepts helped me identify gaps in my understanding and clear up misconceptions that I might not otherwise have noticed.

It is natural to think that we know the material when we can understand the lecture. However, from my experience, as well as from observing my peers and students, there are so many ways we can get confused. Sometimes, the confusion can be cleared up just by talking it through with another person.

Yeow Yi Cheng Carolyn
Teaching Excellence Award for Undergraduate Teaching Assistants, Spring 2020

I abide by the rule of “Minimum Effort, Maximum Efficiency”.
I made it a goal to clarify all my doubts within one class so they don’t accumulate. At the end of each day, I would write my own summaries for each lecture I had attended that day while my memory was still fresh, and finish the homework for those lectures.

If I had extra time, I would preview the lecture notes for the next day to prepare myself for class. The effort I exerted on a daily basis paid dividends.

Chen Jingjing
2020 LSA-AT Nuevo Economics Medal & Prize

While rewatching lecture webcasts, I write down what the lecturer is saying, but in my own words. Doing so forces me to check whether I truly understand the material, or whether I am merely regurgitating words.

Revise and revisit the content of the modules that you have taken as upper-level modules build on lower-level modules. Forgetting everything after exams are over will drastically hinder your ability to succeed in future modules.

Chia Xue Yi
2020 MAS Academic Excellence Prize
2021 Ministry of Trade and Industry (Economist Service) Prize
2022 Valedictorian
2022 Economic Society of Singapore Medal

Thoroughly understanding the material in each chapter, and more importantly, seeing how the different chapters and models come together to form the big picture. Having an appreciation of the bigger picture helps me see the context behind the different ideas in each chapter, each of which can be hard to follow on its own.

An example would be constrained optimisation, which underpins various topics in economics. Individuals make utility-maximising decisions based on their preferences and budget constraints, and firms make profit-maximising decisions based on their production technology and input prices.

I've also found asking questions during class and forming study groups to be extremely helpful.

Daniel Hoong Kay Hian
2020 Ministry of Trade and Industry (Economist Service) Prize
2021 Valedictorian

To internalise and rationalise the material, I try to understand the intuition underlying the material, and I relate the material to prior knowledge or first principles.

Elliot Tan Chek Kai
2020 Paul Sherwood Memorial Prize

Chemical engineering and economics both require analytical skills.
On exams, the questions that differentiate students will usually have a twist. These questions test whether we truly understand concepts. If we are unable to apply our knowledge to different situations, we probably haven't learned anything.

In both fields, there are usually many variables involved in each problem.
If certain assumptions were to change, solving the problem might require a different approach. Therefore, while studying, I ask myself what would happen if something changes.

Lim Wei Qian, Willy
2020 LSA-AT Nuevo Economics Medal & Prize

Consistency and efficiency are crucial. I do my readings and skim through the lecture notes before class. Trying to process the material before it is taught enables me to absorb as much as possible during class.

Teo Po Han
2020 Ho Family Prize

I focus on understanding the key concepts in each lecture rather than blindly memorising them, since we're often tested on our ability to apply the concepts that are covered in lectures.

I also make it a point to consistently review the lecture content and to clear up my misconceptions, as I find leaving things to the last minute to be overly stressful.

Wan Xuan Ting, Meredith
2020 Valedictorian
2020 Rachel Meyer Prize
2020 Thomas H. Silcock - NUS Department of Economics Medal & Prize

Being consistent and keeping up with assignments and readings. It may seem like a chore initially, but it makes revising for the finals much easier, because there is no need to cram all the semester's work into a week of studying.

I also believe that discussing assignments with a study group works wonders, because you can bounce ideas off one another, and identify and correct your misconceptions early.

Chan Yu Wai, Wilson
2021 You Poh Seng Prize in Econometrics
2021 LSA-AT Nuevo Economics Medal & Prize

Staying on task. It may be tempting to skip a week's worth of lectures and learning material. However, work piles up faster than you imagine and there will never be enough time to review everything in detail. Thus, it is better to exercise self-discipline and complete tasks on time so that you can approach your professors or TAs for clarification if necessary.

Clare Chia Xiao Fen
2021 LSA-AT Nuevo Economics Medal & Prize

Annotating while reading. I am actually a very bad reader and reading to me is passive. I can recognise each word in the sentence, but I'm unable to comprehend what the sentence is trying to convey overall, especially academic papers that can be quite technical or abstract. Annotating is therefore important for me, as it makes reading active. The process of writing notes on the side enables me to consolidate what I read and pick out the key ideas.

Jennifer Yao Chenyin
2021 Ho Family Prize

Asking questions, recapping and summarising, and practicing. For me, listening to a lecture is not a passive event where I simply absorb what is said. I try to understand the material at a deeper level. Some of the questions I found useful to ponder are: What are the assumptions being made in this model or concept? How are the formulas derived? Are there any cases that may be contradictory or unusual? How are these inconsistencies resolved by the model?

Economics, unlike the physical sciences, is not an exact science. There are many assumptions made, and every model has its "strengths" and "weaknesses." If I am able to identify those, I know I have gained a deeper insight into the theory.

Khiew Zhi Kai
2020 NTUC Medal & NTUC FairPrice Foundation Prize
2021 Lim Tay Boh Memorial Medal
2021 Paul Sherwood Memorial Medal

I think it is important that we really understand what we are being taught. Many a time, especially in engineering modules, complex formulas are thrown at us with a lot of assumptions and proofs. Since those are usually not tested, it may be tempting to simply glance at or even skip them since on an exam, we only need to know how to use them.

However, I always try to understand the rationale behind a formula so that I have a better understanding of its use and the implications of the various parameters. Ultimately, spending the time and effort to understand an abstract formula, theory, or model makes learning the content much easier for me.

Lester Ng Keng Hui
2021 LSA-AT Nuevo Economics Medal & Prize

Practice and derivation, with the ultimate goal of internalising knowledge. For almost every single module I took, I always prepared my own comprehensive notes based on learning materials provided by professors. When writing up such notes, I always try to derive everything from scratch; in this way, I am able to bridge many knowledge gaps that I wasn't aware of. I try to go through my notes at least two to three times to ensure that the course knowledge becomes almost instinctive.

Liu Shangke
2020 Daiwa Prize
2021 Lee Kuan Yew Gold Medal
2021 Thomas H. Silcock – NUS Department of Economics Medal & Prize

I try to explain the concepts we are learning to my friends; through the process, I discover inconsistencies in my own understanding. Also, making my own summaries on paper helps me collect my thoughts and ensures that I spend enough time thinking about every detail.

Naman Agrawal
2021 Wee Mon Cheng Medal

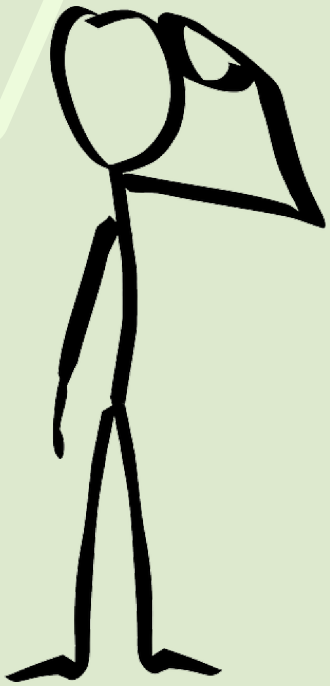
I jot down my questions during class and consult the lecturer right after class. Some of us may feel *paiseh* to approach the lecturer in front of the class, but chances are, another student has the same question. So even if you think your questions are silly, you can take solace in the fact that you are likely generating positive externalities!

Neo Yu Xuan
2021 Economic Society of Singapore Medal

Studying with friends whenever possible! I find myself tending to procrastinate, so studying with friends helps me to focus. Also, exchanging ideas and recapping concepts with friends help me gain a deeper understanding of the module content.

Quek Ee Pin
2020 Shell Silver Medal
2021 MAS Academic Excellence Prize

What do I need to do
to succeed in this class
(and in college)?



How Do We Learn?

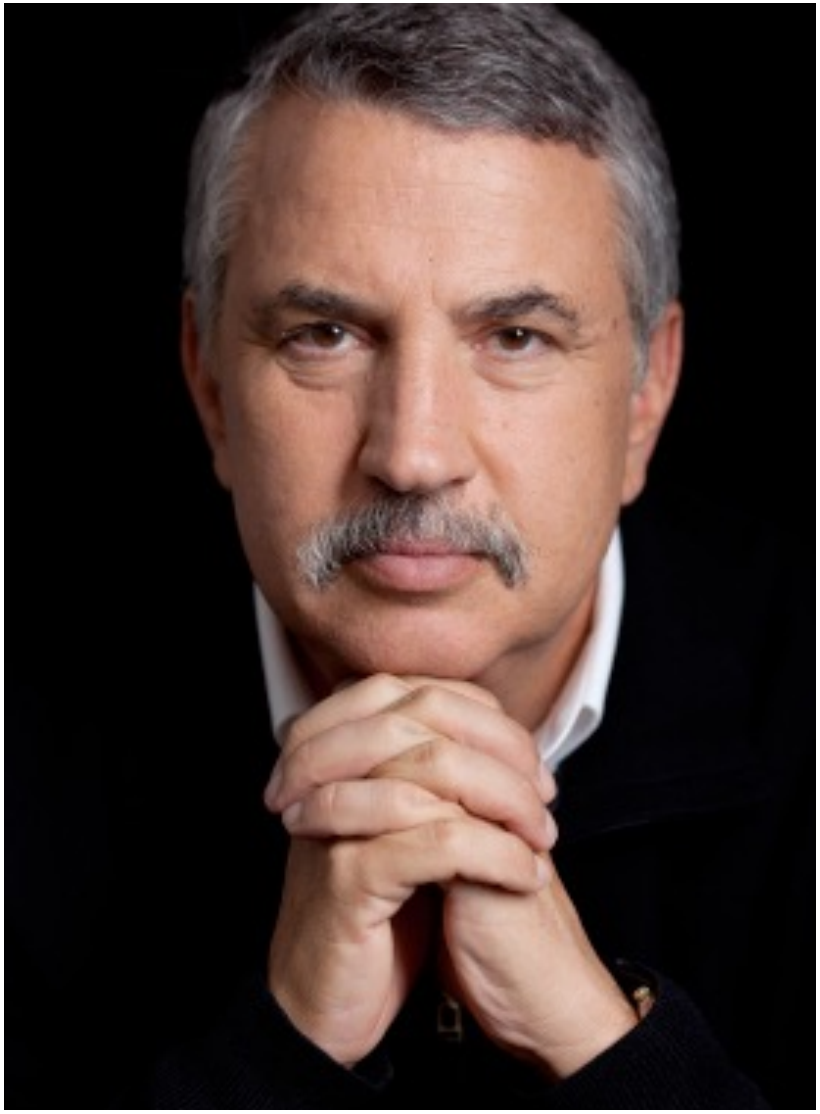
- The most effective study strategies:
  - **Retrieving / Testing**
  - **Spacing**
  - **Interleaving**
- Articles and book excerpts are uploaded on *LumiNUS => Files => How to Learn and How to Succeed.*

Tips for Doing Well in EC1101E

- Work on problems.
- Connect the dots.
- Apply what you have learned to the world around you.
- Teach someone.
- Don't be afraid of making mistakes.
- Ask, seek, knock.

"Because increasingly the world does not care what you know. Everything is on Google. The world only cares, and will only pay for, what you can do with what you know."

Thomas Friedman
American journalist, author, op-ed columnist, and winner of three Pulitzer Prizes



Understanding and Applying

- Blindly memorizing and regurgitating will not get you far in this class or in college or in life.
- Focus on **understanding** and **applying** what you're learning. Explain a concept to someone using everyday lingo. If you can explain "opportunity cost" or "diminishing marginal returns" to your grandma who did not study economics, you have nailed it.

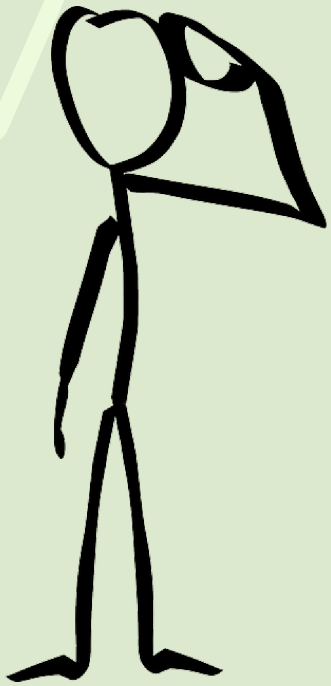
During my first two years at NUS, if I did not know how to answer a question on a problem set, I did not bother attempting the question at all. I often attended tutorials without having attempted many of the questions.

I did not realise what I was missing out on until I started teaching. I saw firsthand that my students were more able to master the material when they attempted the questions, even if they had gotten everything wrong on their attempt.

I realised that my fear of failure and my dislike of spending time and effort that may potentially be wasted had gotten in the way of getting the most out of problem sets and tutorials. In my last year at NUS, I would spend hours and days doing problem sets even when it seemed like I was getting nowhere. This attitude came a few years late, but better late than never!

Yeow Yi Cheng Carolyn
Teaching Excellence Award for Undergraduate Teaching Assistants, Spring 2020

Getting straight A's in college is necessary and sufficient to be successful in my career, right?



Straight A's

- By all means, try your best and aim for A's.
- But your grades do not define you.
- Neither do they guarantee success (or failure) in your career.

Straight A's

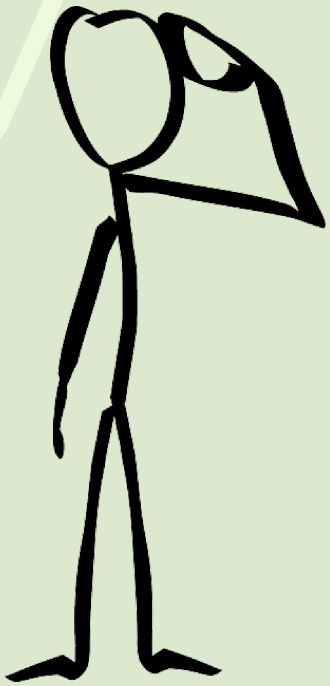
- In "*What Straight-A Students Get Wrong*," Adam Grant writes:
  - Academic excellence is not a strong predictor of career excellence.
  - Across industries, research shows that the correlation between grades and job performance is **modest** in the first year after college and **trivial** within a handful of years.

Straight A's

- In "*What Straight-A Students Get Wrong*," Adam Grant writes:
  - Academic grades rarely assess qualities like **creativity, leadership,** and **teamwork skills,** or **social, emotional,** and **political intelligence.**
  - Yes, straight-A students master cramming information and regurgitating it on exams.
  - But career success is rarely about finding the right solution to a problem — it's more about finding the right problem to solve.

The article is uploaded on *LumiNUS => Files => How to Learn and How to Succeed.*
https://www.nytimes.com/2018/12/08/opinion/college-gpa-career-success.html

What skills/attributes are employers looking for?



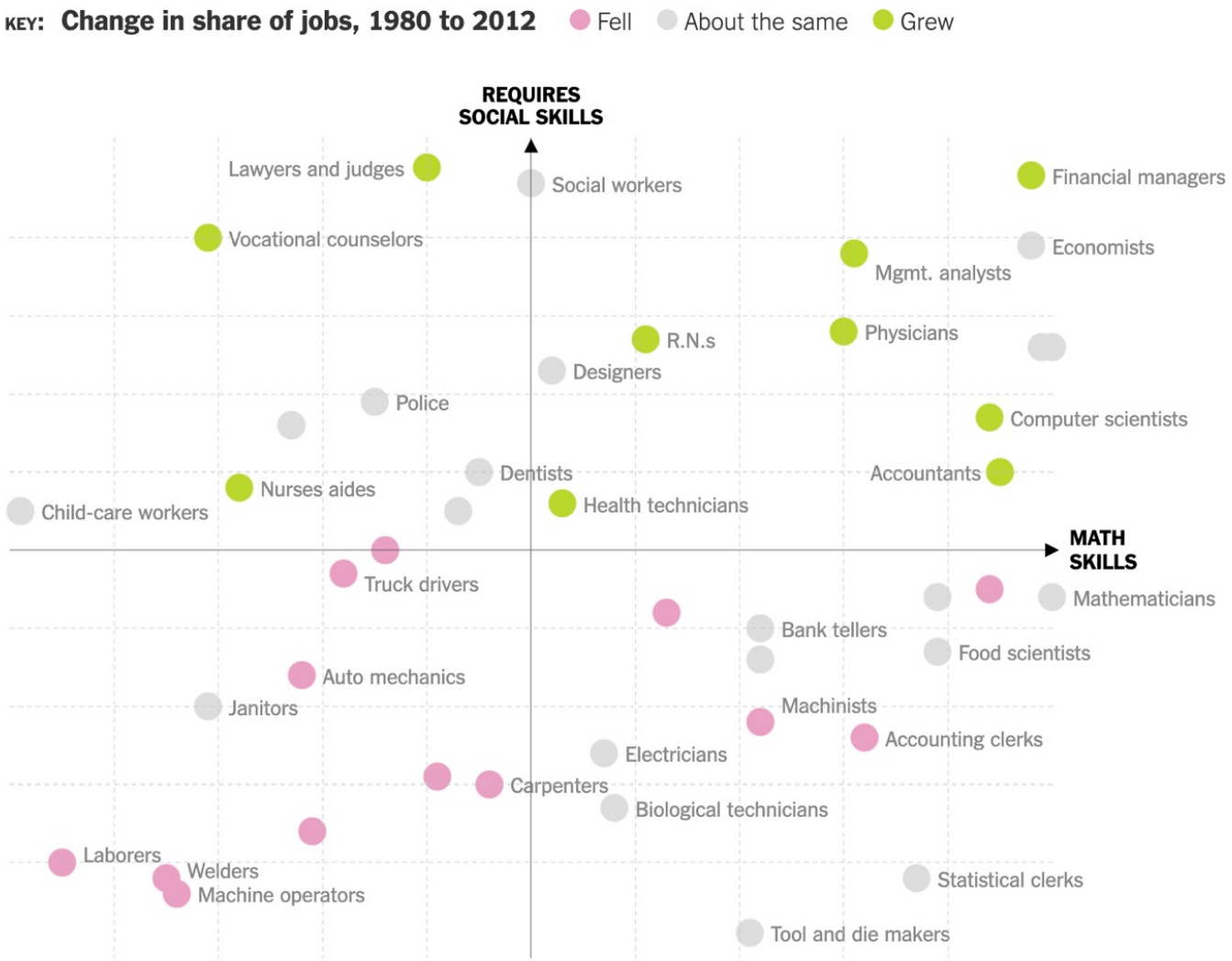
Skills in the Labor Market

- For all the jobs that machines can now do — whether performing surgery, driving cars or serving food — they still lack one distinctly human trait. They have no social skills.
- Yet skills like cooperation, empathy, and flexibility have become increasingly vital in modern-day work.
- Occupations that require strong **social skills** have grown much more than others since 1980, according to new research.
- And the only occupations that have shown consistent wage growth since 2000 require both **cognitive skills** and **social skills.**

The article is uploaded on *LumiNUS => Files => How to Learn and How to Succeed.*
https://www.nytimes.com/2018/12/08/opinion/college-gpa-career-success.html

Math and Science Are Not Enough

The jobs that have grown most consistently in the last two decades have been those that require high math skills and high social skills.



Source: David Deming, Harvard University

"The economic return to pure technical skills has flattened, and the highest return now goes to those who combine soft skills – excellence at communicating and working with people – with technical skills."

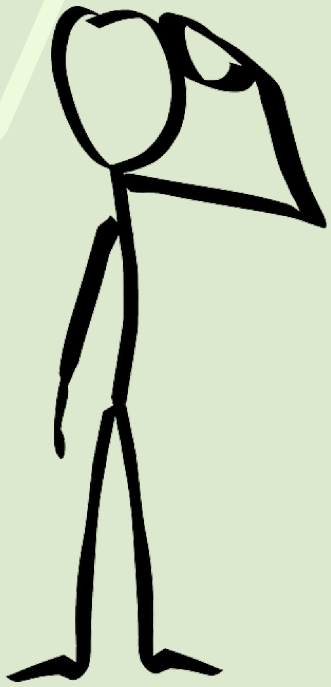
Larry Katz
Professor of Economics, Harvard University

Attributes that Employers Value

Attribute	Percent of Employers
Ability to work in a team	81.0%
Problem-solving skills	79.0%
Analytical/Quantitative skills	76.1%
Communication skills (verbal)	73.2%
Communication skills (written)	72.7%
Initiative	67.8%
Leadership	67.8%
Technical skills	67.8%
Flexibility/adaptability	65.9%
Strong work ethic	65.4%

Source: *Job Outlook 2021 Spring Update*, National Association of Colleges and Employers

What am I motivated by?



What Motivates You?

- **Intrinsic** motives, *e.g.*, personal fulfillment or interest?
- **Extrinsic** motives, *e.g.*, wealth, status, power?

What Motivates You?

- Research on cadets at the U.S. Military Academy at West Point showed that **intrinsically** motivated cadets were more successful than **extrinsically** motivated cadets.
- **Intrinsically** motivated cadets:
  - Were more likely to graduate and become commissioned officers.
  - Had earlier promotion recommendations.
  - Were more likely to remain in the military beyond their minimum five years of mandatory service.