

# Reflections on Teaching

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# Prologue

What this talk is about:

- It is a *subjective* presentation on *my* understanding of the role of a teacher

What this talk is not about:

- It is not a prescription to become a good teacher
- It is not a commentary on which teaching-learning theories and practices to follow

Why is then this talk?

- To engage in brainstorming
- To facilitate peer level learning

# What is learning?

Learning is the interaction between **what students know**, **the new information they encounter**, and **the activities they engage in** as they learn. Students construct *their own understanding* through experience, interactions with content and others, and reflection.

*What the Best College Teachers Do*, Ken Bain,

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You cannot teach a man anything, you can only help him find it within himself.

- Galileo

## What is learning?

সংগ্রহযোগ্য জিনিসটা যখনই হাতে আসে তখনই তাহার ব্যবহারটি জানা, তাহার প্রকৃত পরিচয় পাওয়া, জীবনের সঙ্গে সঙ্গে জীবনের আশ্রয়স্থলটি গড়িয়া তোলাই রীতিমত শিক্ষা।

*শিক্ষা, রবীন্দ্রনাথ ঠাকুর*

## What is learning not?

- Learning is not only about memorization
- Learning is not only about application
- Learning is not only about ratiocination (exact thinking)

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I never teach my pupils, I only attempt to provide the conditions in which they can learn. - Einstein

## How do we learn?

Learning takes place through the active behavior of the student: **it is what he does that he learns**, not what the teacher does.

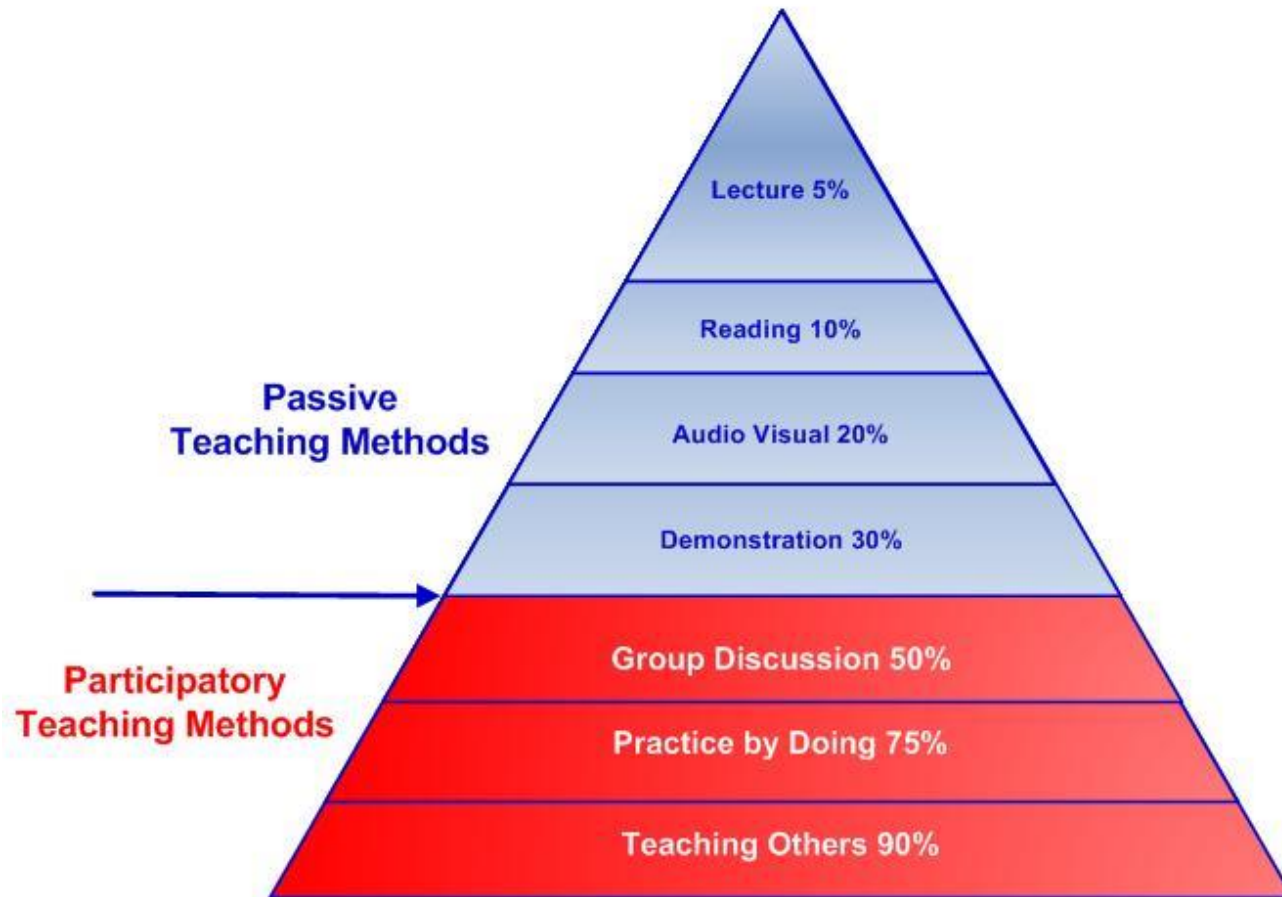
Ralph Tyler, 1949

নিজে চিন্তা করিবে, নিজে সন্ধান করিবে, নিজে কাজ করিবে, এমনতরো মানুষ  
তৈরি করিবার প্রণালী এক, আর পরের হুকুম মানিয়া চলিবে, পরের মতের  
প্রতিবাদ করিবে না, ও পরের কাজে জোগানদার হইয়া থাকিবে মাত্র, এমন  
মানুষ তৈরির বিধান অন্যরূপ।

শিক্ষা, রবীন্দ্রনাথ ঠাকুর

# How do we learn?

## The Learning Pyramid



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I hear and I forget. I see and I remember. I do and I understand. - Confucius

## What factors influence learning?

- People learn in different ways
- Learning is a social and cultural phenomenon
- Motivation is important for learning
- Prior knowledge can help or hinder learning
- Goal directed practice with targeted feedback enhances the quality of learning
- Expectations affect learning

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Bodily exercise, when compulsory, does no harm to the body; but knowledge which is acquired under compulsion obtains no hold on the mind. - Plato

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# What are the non-traditional pedagogical techniques?

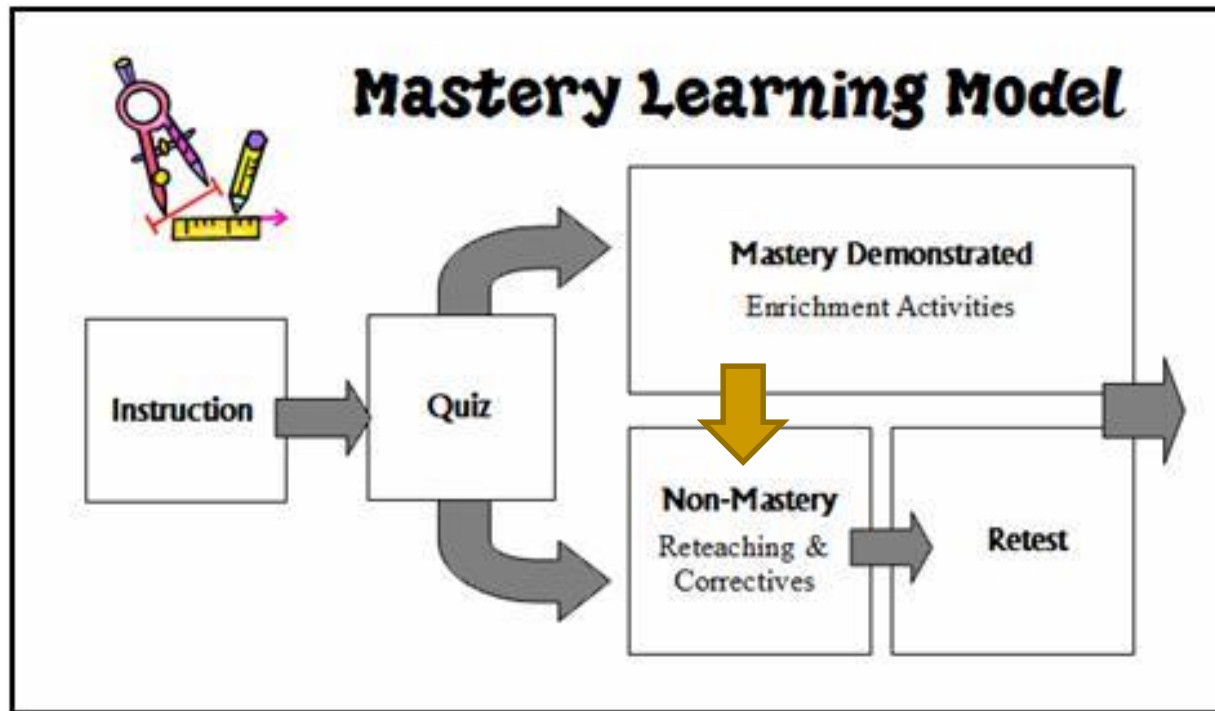
- Mastery learning
- Flipped classroom
- Use of technology

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Don't limit a child to your own learning, for he was born in another time. -  
Rabindranath Tagore

# Mastery learning

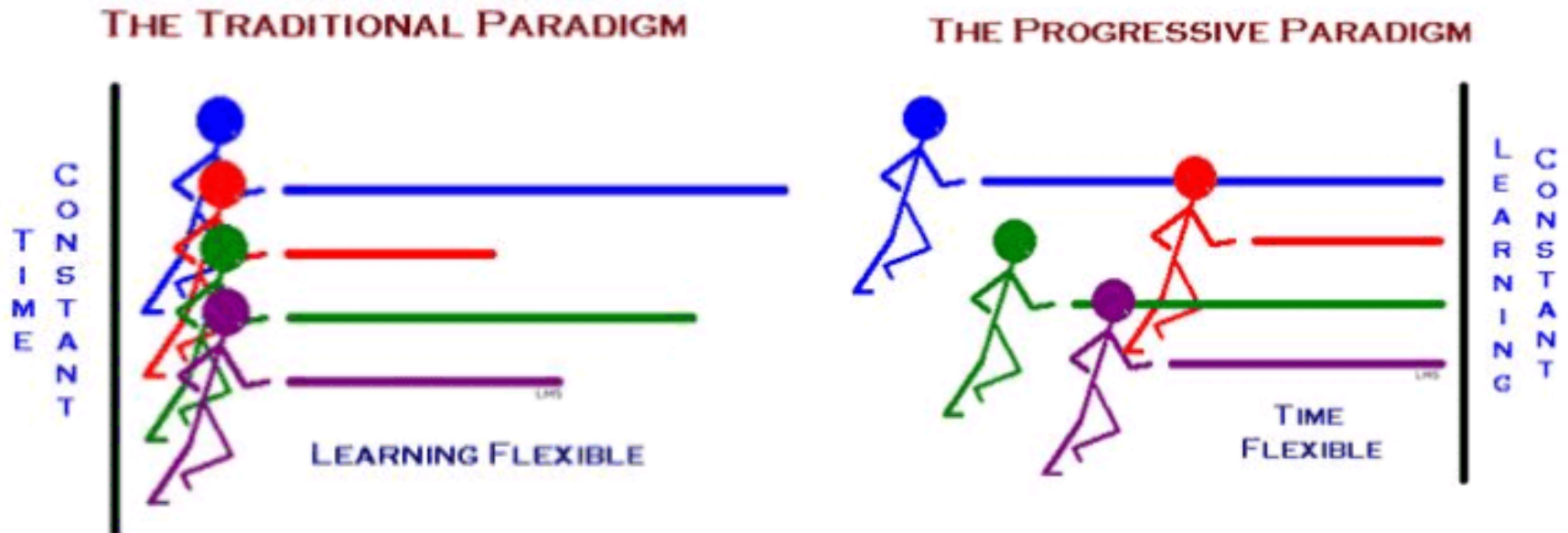
A student must achieve a level of mastery in current topic before moving on to learn new ones!



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If people knew how hard I worked to get my mastery, it wouldn't seem so wonderful at all. - Michelangelo

# Mastery learning



Fixed time for all

- Same input
- Variable comprehension

Variable time

- Variable input
- Fixed comprehension for all

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Order and simplification are the first steps toward the mastery of a subject. - Thomas Mann

# Flipped classroom


## Traditional Classroom




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- Instructor prepares material to be delivered in class.
- Students listen to lectures and other guided instruction in class and take notes.
- Homework is assigned to demonstrate understanding.

## Flipped Classroom



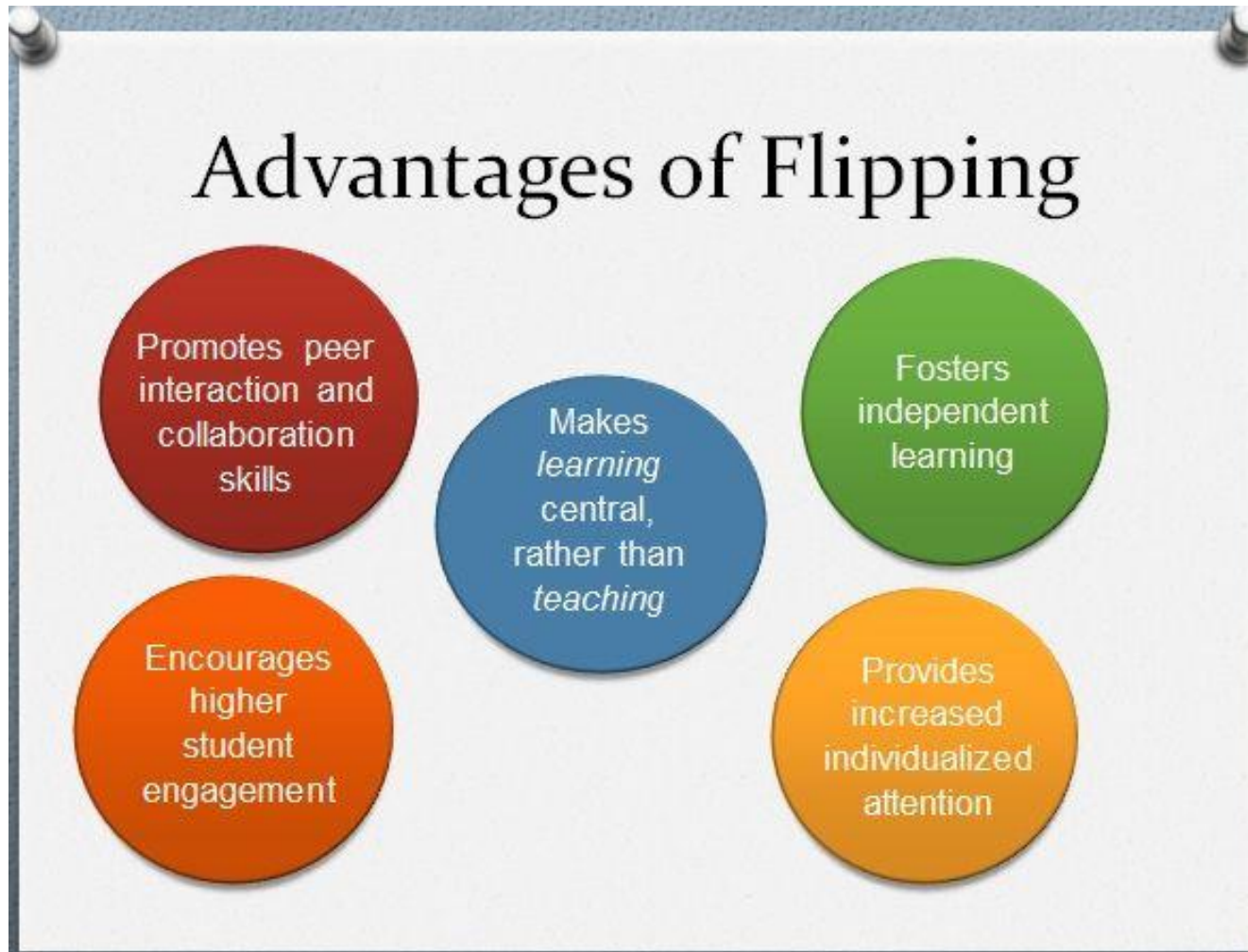
- Instructor records and shares lectures outside of class.
- Students watch / listen to lectures before coming to class.
- Class time is devoted to applied learning activities and more higher-order thinking tasks.
- Students receive support from instructor and peers as needed



Traditional spaces only reinforce traditional teaching and learning.  
– Jon Bergmann



## Flipped classroom



Flipping the classroom is more about a mindset: redirecting attention away from the teacher and putting attention on the learner and the learning.

– Aaron Sams

# Use of technology

## Teaching with Technology

How can technology help you?

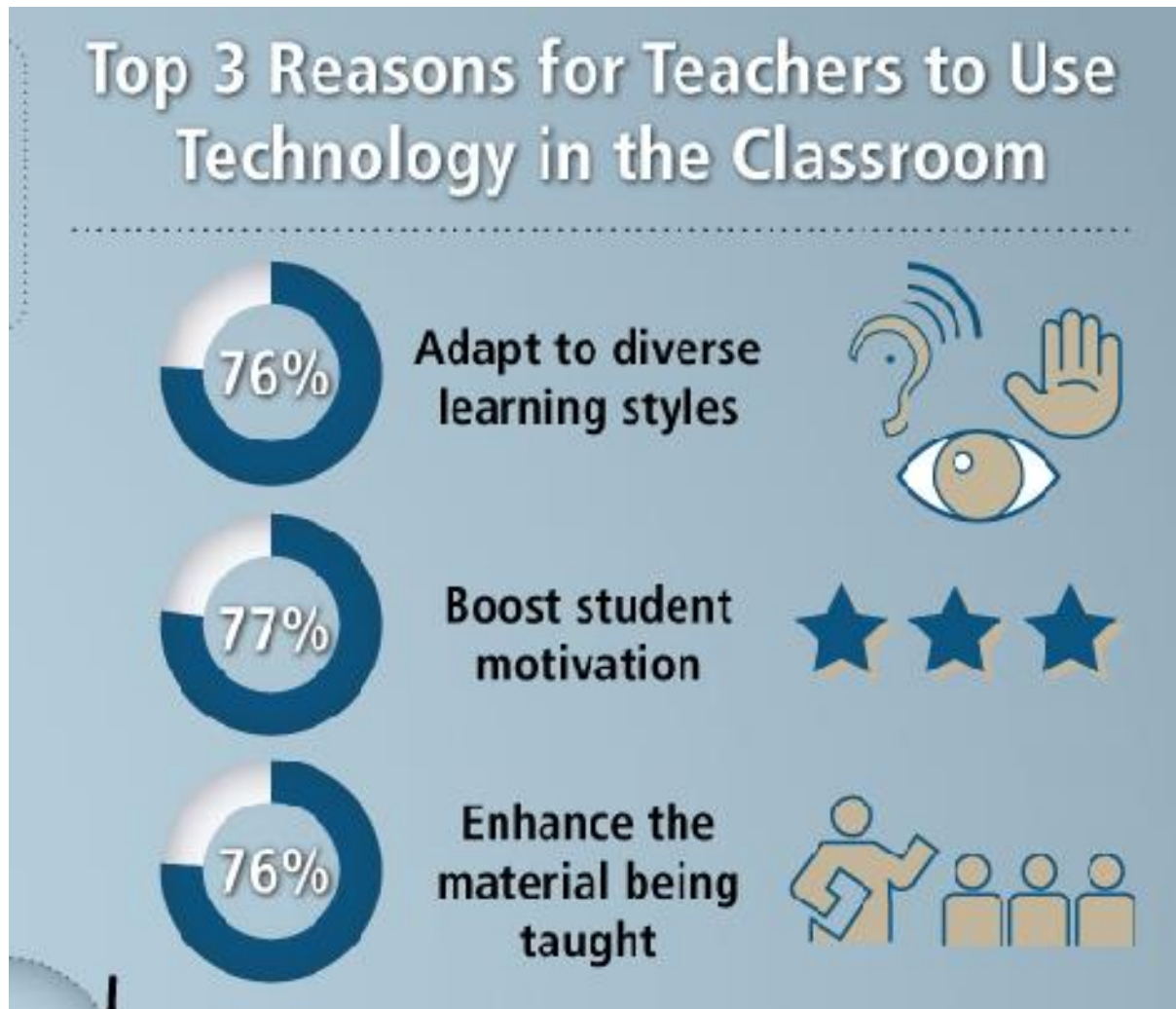
- Online collaboration tools
- Presentation software
- Tablets
- Course management tools
- Clickers and smartphones
- Lecture capture tools



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Technology is just a tool. In terms of getting the kids working together and motivating them, the teacher is most important. - Bill Gates

# Use of technology



New technology is common, new thinking is rare. – Peter Blake

# Assessment



Assessment is the weakest link in our teaching-learning chain!

- We demand pedagogical innovation from our teachers
- Innovative teaching also needs appropriate assessment tools
- We hardly give teachers any freedom in selecting assessment tools

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If the only tool you have is a hammer, you tend to see every problem as a nail. - Abraham Maslow

## Why do we want to become teachers?

- Passionate about teaching
- Enjoy being in the presence of students
- Good pay
- Reduced/flexible working hours
- Easier to get a teaching job
- Teaching job commands greater social respect
- To meet expectations of others

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Teachers, I believe, are the most responsible and important members of society. - Helen Caldicott

## How can we be a better teacher?

Kids don't remember what you try to teach them. They remember what you are.

Jim Henson

Teaching is not a performing art. A teacher has only one hat to wear.

Yours Truly

## How can we be a better teacher?

Acquire new knowledge whilst thinking over the old, and you may become a teacher of others.

Confucius

# How can we be a better teacher?

প্রথমেই জ্ঞানশিক্ষার আশ্রম স্থাপন করিতে হইলে গুরুর প্রয়োজন। শিক্ষক কাগজে বিজ্ঞাপন দিলেই জোটে কিন্তু গুরু তো ফরমাশ দিলেই পাওয়া যায় না। এই সম্পর্কে আমার বক্তব্য এই যে, আমাদের সংগতি যাহা আছে, তাহার চেয়ে বেশী আমরা দাবী করিতে পারি না এ কথা সত্য। অত্যন্ত প্রয়োজন হইলেও সহসা আমাদের পাঠশালায় গুরুমহাশয়ের আসনে যাজ্ঞবল্ক্য ঋষির আমদানি করা কাহারও আয়ত্তাধীন নহে। .....

আমরা যাহাকে ইস্কুলের শিক্ষক করি তাঁহাকে এমন করিয়া ব্যবহার করি যাহাতে তাঁহার **হৃদয়মনের** অতি অল্প অংশই কাজে খাটে - ফোনোগ্রাফ যন্ত্রের সঙ্গে একখানা বেত এবং কতটা পরিমাণ মগজ জুড়িয়া দিলেই শিক্ষক তৈরি করা যাইতে পারে। কিন্তু এই শিক্ষককেই যদি গুরুর আসনে বসাইয়া দাও তবে স্বভাবতই তাঁহার **হৃদয়মনের শক্তি সমগ্রভাবে শিষ্যের প্রতি** **ধাবিত** হইবে। অবশ্য তাঁহার যাহা সাধ্য তাহার চেয়ে বেশী তিনি দিতে পারিবেন না, কিন্তু তাহার চেয়ে কম দেওয়াও তাঁহার পক্ষে লজ্জাজনক হইবে।

রবীন্দ্রনাথ ঠাকুর



## How can we be a better teacher?

My basic philosophy of teaching was straightforward and **deeply personal**. I wanted to teach the way I wished that I myself had been taught. Which is to say, I hoped to convey the sheer joy of learning, the thrill of understanding things about the universe. I wanted to pass along to students not only the logic but the beauty of math and science.

Salman Khan

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Spoon feeding in the long run teaches us nothing but the shape of the spoon.

- E. M. Forster

## How can we be a better teacher?

The new agenda for universities, to sell education and to provide for market needs, makes them like any other corporation that sells a product. Vice-chancellors become CEOs of a firm; the administration, top heavy with managers, dictates policy and such matters as what courses are to be taught and what are to be cut.

John Biggs

# What best teachers do?

## 1. *What do best teachers know and understand?*

- They know their subjects extremely well regardless of whether they are notable researchers or not.
- They have intuitive understanding of human learning which people are beginning to understand through research in learning science.

# What best teachers do?

## 2. *How do they prepare to teach?*

They treat their lectures, discussion sections, problem-based sessions, and other elements of teaching as serious intellectual endeavors as intellectually demanding and important as their research and scholarship.

## What best teachers do?

### 3. *What do they expect of their students?*

- They expect *more*.
- They avoid objectives that are arbitrarily tied to the course and favor those that embody the kind of thinking and acting expected for life.

# What best teachers do?

## 4. *What do they teach when teach?*

the best teachers create “natural critical learning environment.” In that environment, people learn by **confronting** intriguing, beautiful, or important problems, authentic tasks that **challenge** them with ideas, **rethink** their assumptions, and **examine** their mental models of reality. These are challenging yet supportive conditions. Learners feel a sense of control over their education; work collaboratively with others; believe that their work will be considered fairly and honestly; and try, fail, and receive feedback from experts separate from any summative judgment of their effort.

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## What best teachers do?

### 5. *How do they treat their students?*

- They treat students decently.
- They reflect a strong trust in students.
- They believe their students want to learn and assume they can.
- They display openness with students discussing their own journey in life, their own sense of curiosity about life, etc.

## What best teachers do?

6. *How do they check their own progress and evaluate their own efforts?*

- They assess their own efforts and make needed change.
- They avoid judging students on arbitrary standards.
- They remind themselves what can go wrong.
- They don't blame students for any of their difficulties.
- They see their own efforts as small parts in a larger educational community rather than opportunities to display personal greatness.



## How can we be a better teacher (revisited)?

By continually striving to answer the following question and acting accordingly.

What is best for the students in my classroom?

## Epilogue

It is increasingly being recognized that good teaching is as much a function of an institution-wide infrastructure as it is a gift with which some lucky academics are born.

John Biggs

# EWU?

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