

Peer Instruction



Innovation in Teaching — Harvard Business Publishing
Curso Santander
10 January 2024



quick reflection



The background of the slide is a faded, artistic illustration of a person's face, focusing on the eyes. The face is rendered in a sketchy, painterly style with muted colors. The eyes are large and expressive, looking directly forward. The background of the illustration consists of vertical stripes in shades of yellow and red. The text is overlaid on this background.

quick reflection

think of something you are good at

The background is a faded image of a book cover. It features a portrait of a man with dark hair and a beard, looking slightly to the side. The text 'quick reflection' is printed in a bold, black, sans-serif font at the top of the cover. The book is bound in a light-colored, textured material, possibly cloth or paper, with visible vertical lines suggesting the spine and cover edges.

quick reflection

how did you become good at that?









What are the factors that determine the success of a business? (10 marks)

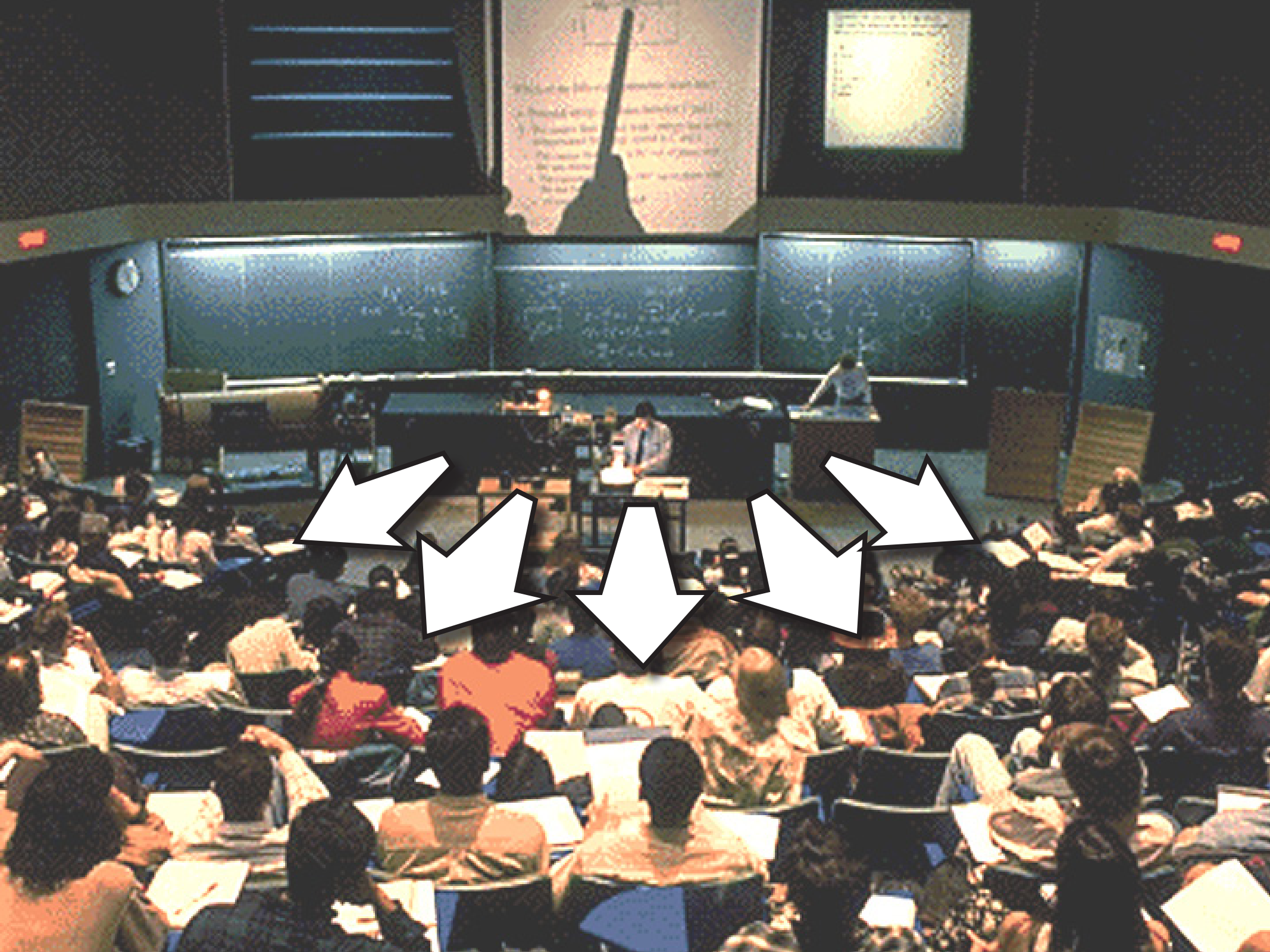
- 1. Financial strength
- 2. Human resources
- 3. Technological innovation
- 4. Marketing strategy
- 5. Government support
- 6. International trade
- 7. Environmental protection
- 8. Social responsibility
- 9. Innovation and creativity
- 10. Risk management

Year	Revenue	Profit	Assets	Liabilities
2010	100	20	120	20
2011	120	25	145	25
2012	150	30	175	30
2013	180	35	210	35
2014	200	40	240	40

1. The first step is to identify the problem. This involves a thorough analysis of the situation and the identification of the key issues. Once the problem has been identified, the next step is to develop a plan of action. This plan should outline the steps that need to be taken to solve the problem and the resources that will be required.

2. The second step is to implement the plan. This involves putting the plan into action and monitoring the progress. It is important to have a clear timeline and to assign responsibilities to specific individuals. Regular communication and reporting are essential to ensure that the plan is being followed and that any problems are identified early.

3. The third step is to evaluate the results. This involves comparing the actual results with the expected results and identifying any gaps. If there are gaps, it is important to analyze the reasons and make adjustments to the plan. The final step is to document the results and share them with the relevant stakeholders.







an illusion. . .





1. transfer of information



1. transfer of information

2. assimilation of that information



1. transfer of information (in class)

2. assimilation of that information



1. transfer of information (in class)

2. assimilation of that information (out of class)



**Should focus
on THIS!**

1. transfer of information (in class)

2. assimilation of that information (out of class)



1. transfer of information (in class)

2. assimilation of that information (out of class)



1. transfer of information (out of class)

2. assimilation of that information (in class)

The word "Peer" is written in a large, white, sans-serif font with a light blue outline. A dashed yellow line with an arrow at the end forms a circle around the two 'e's. A dotted blue line with an arrow at the end starts from the right side of the word and points towards the bottom right.

Peer

1. transfer of information (out of class)

2. assimilation of that information (in class)

The word "INSTRUCTION" is written in a white, sans-serif font, tilted at an angle. A dotted blue line with an arrow at the end starts from the left side of the word and points towards the top left.

INSTRUCTION

question

question



think

question



think



poll

question



think



poll



discuss

question



think



poll



discuss



repoll

question



think



poll



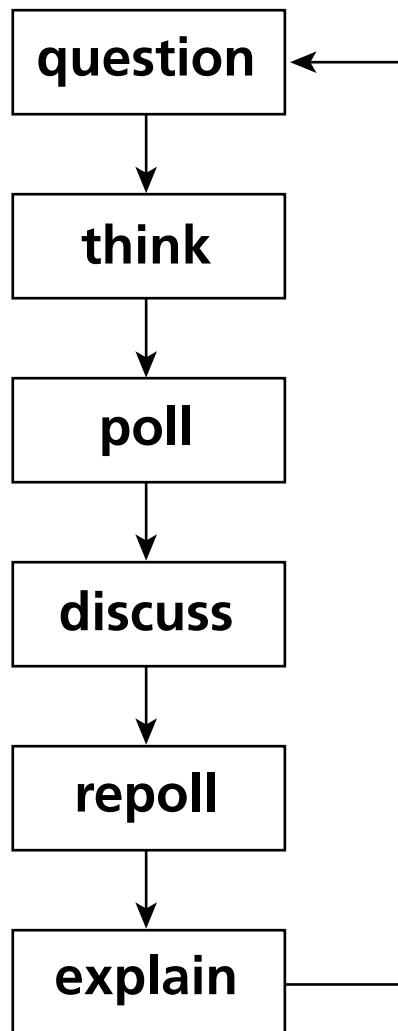
discuss



repoll



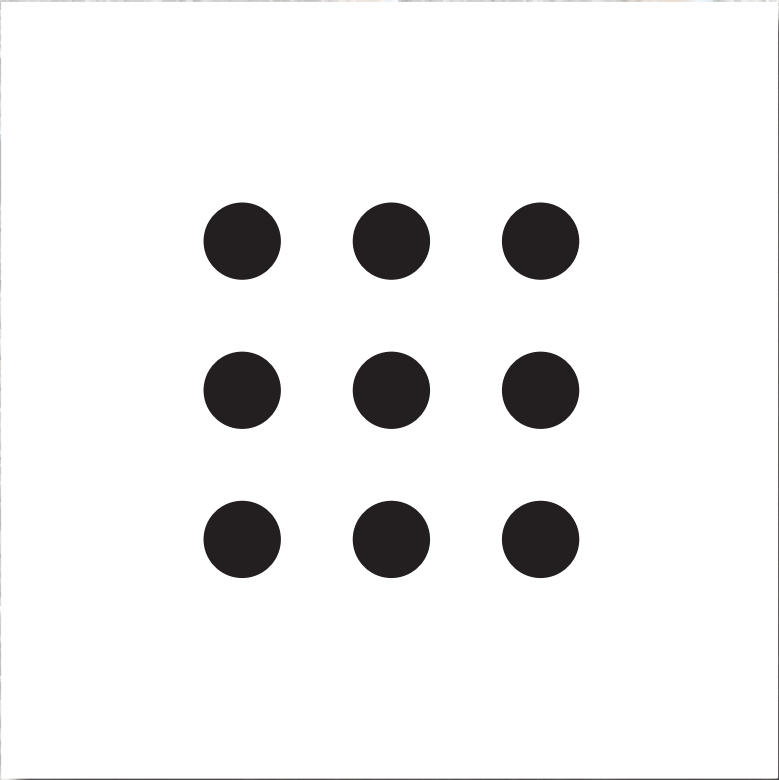
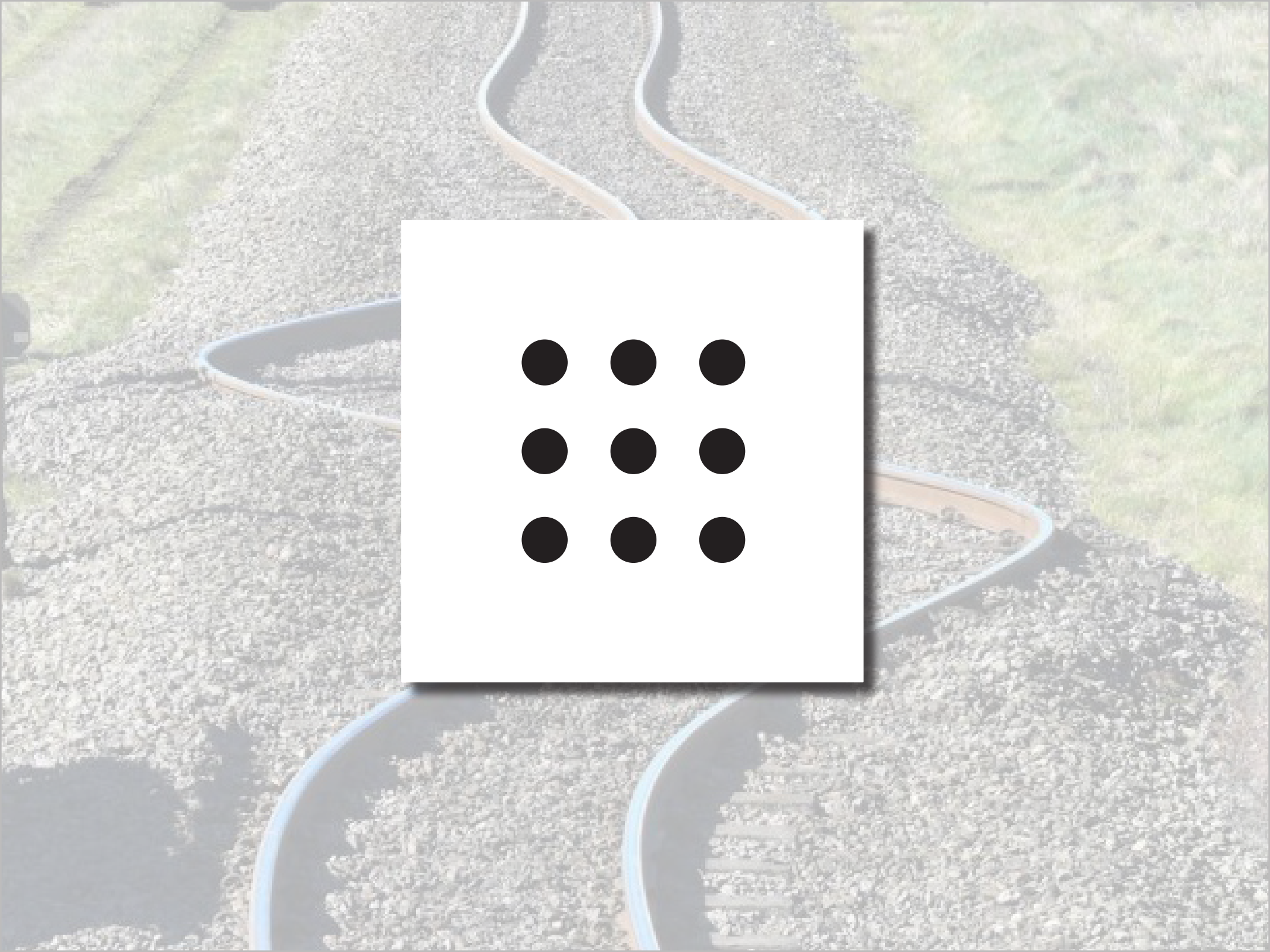
explain

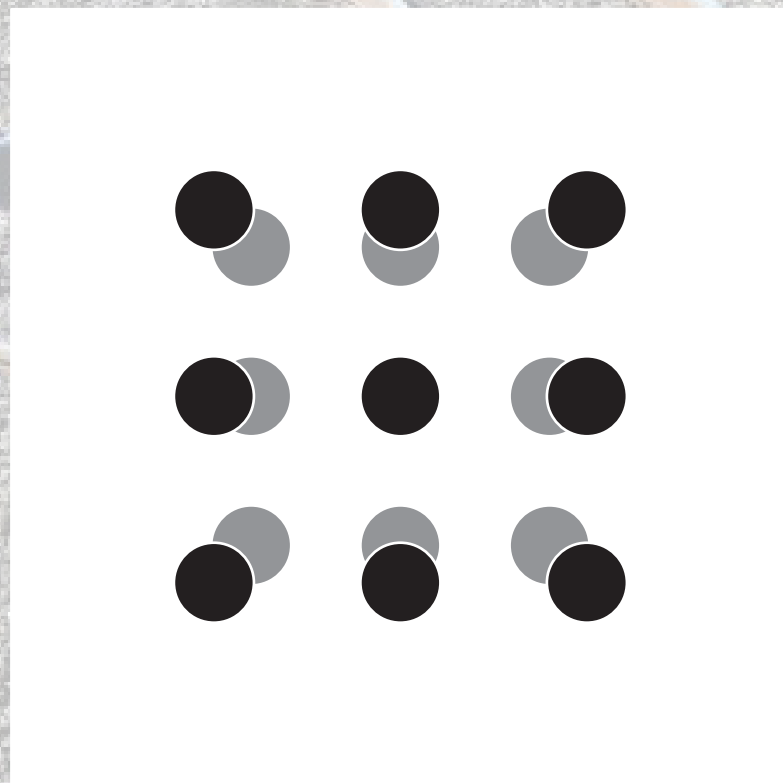




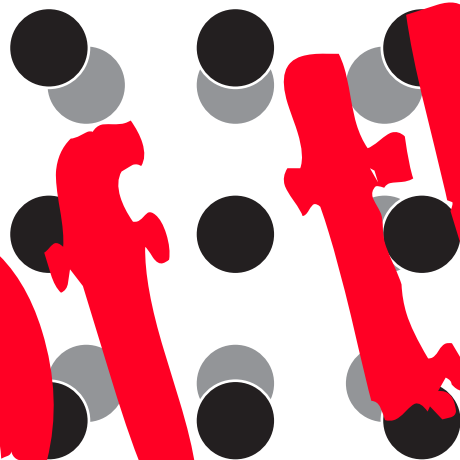
A photograph of a railway track with a wavy, undulating path, illustrating the concept of thermal expansion. The track is made of gravel and has a blue line painted along its length. The track is set against a background of green grass. The text "thermal expansion" is overlaid on the image.

thermal expansion





all of them



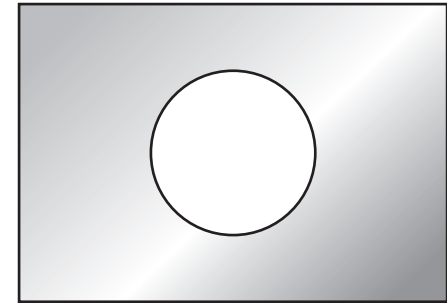
Consider a rectangular metal plate with a circular hole in it.



Consider a rectangular metal plate with a circular hole in it.

When the plate is uniformly heated, the diameter of the hole

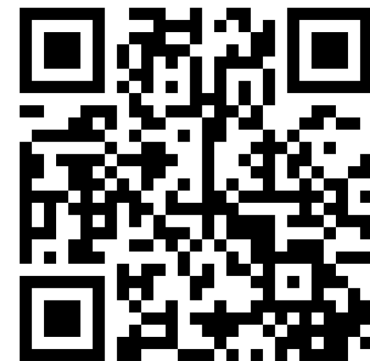
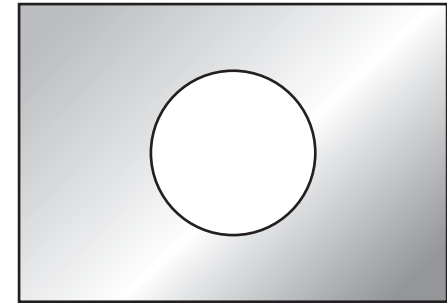
- 1. increases.**
- 2. stays the same.**
- 3. decreases.**



Consider a rectangular metal plate with a circular hole in it.

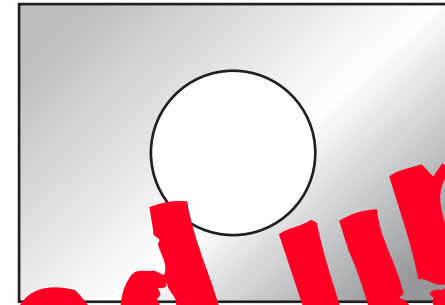
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www.menti.com
3335 0765

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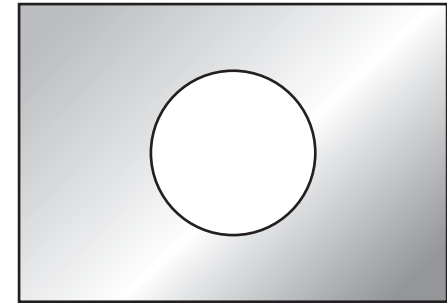
- 1. increases.**
- 2. stays the same.**
- 3. decreases.**

you got all fired up!

Consider a rectangular metal plate with a circular hole in it.

When the plate is uniformly heated, the diameter of the hole

- 1. increases.**
- 2. stays the same.**
- 3. decreases.**



Before I tell you the answer, let's analyze what happened.

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You...

Before I tell you the answer, let's analyze what happened.

You...

1. made a commitment

Before I tell you the answer, let's analyze what happened.

You...

- 1. made a commitment**
- 2. externalized your answer**

Before I tell you the answer, let's analyze what happened.

You...

- 1. made a commitment**
- 2. externalized your answer**
- 3. moved from the answer/fact to reasoning**

Before I tell you the answer, let's analyze what happened.

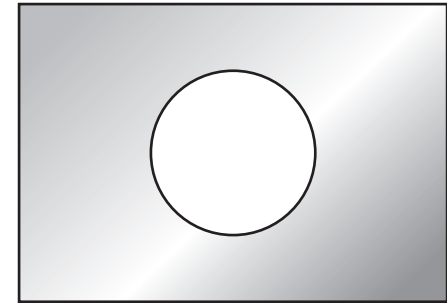
You...

- 1. made a commitment**
- 2. externalized your answer**
- 3. moved from the answer/fact to reasoning**
- 4. became emotionally invested in the learning process**

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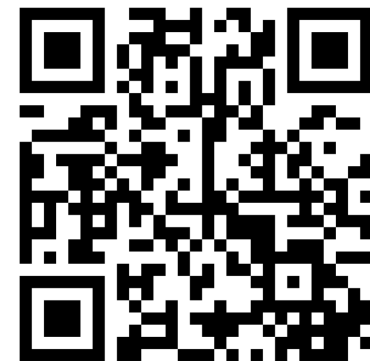
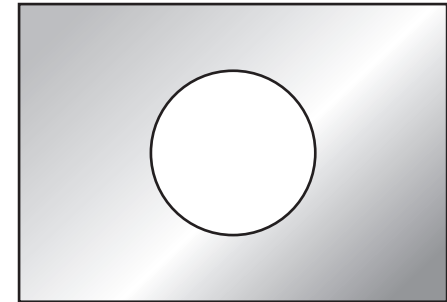
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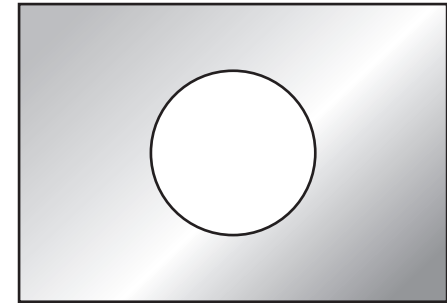
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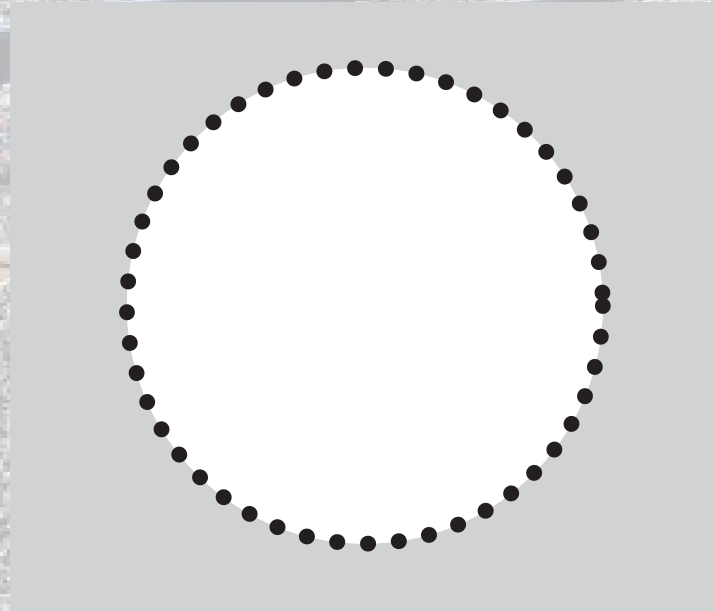
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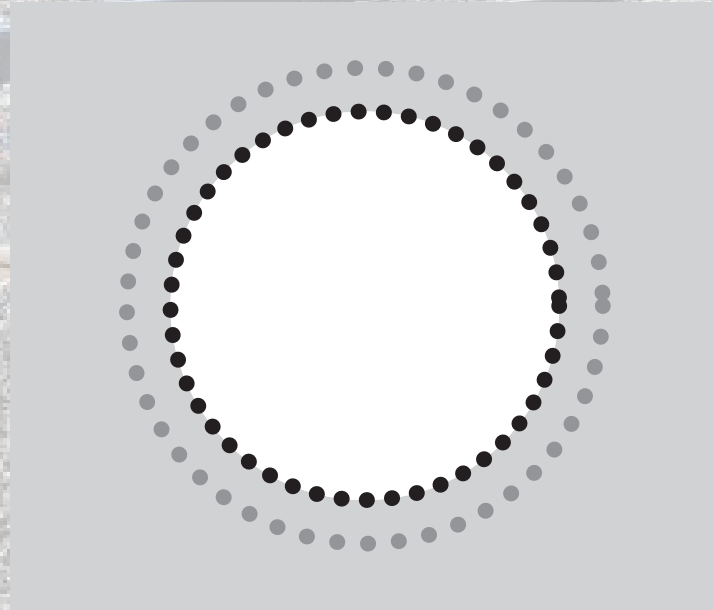


- 1. increases. ✓**
- 2. stays the same.
- 3. decreases.

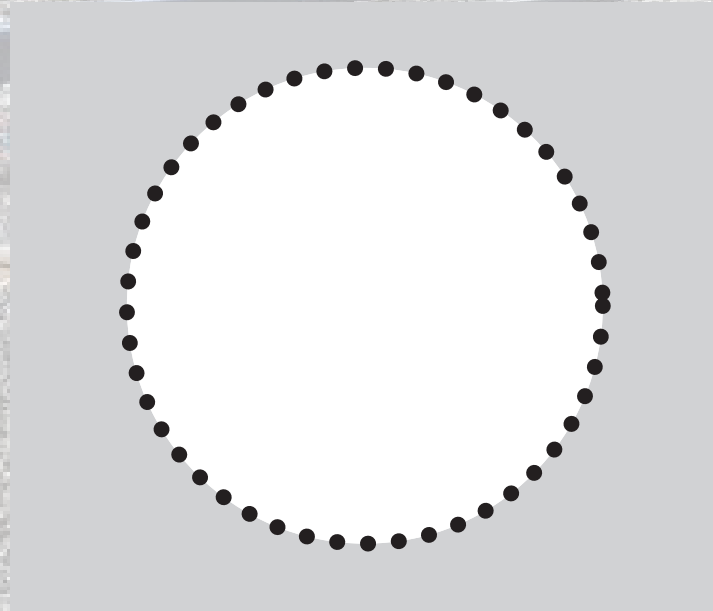
consider atoms at rim of hole



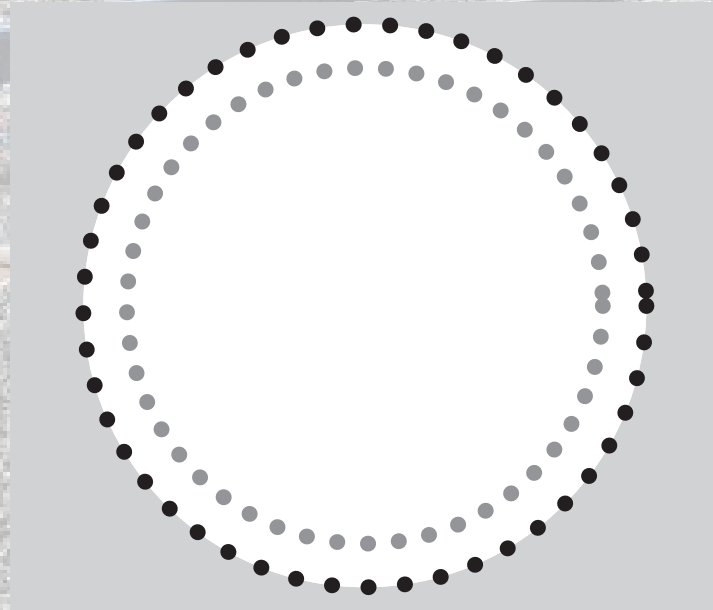
consider atoms at rim of hole



consider atoms at rim of hole



consider atoms at rim of hole



consider atoms at rim of hole

you won't forget this

An aerial photograph of a gravel path that winds in a series of S-curves. The path is bordered by a thin orange line on the left and a thin blue line on the right. The path leads from the top of the frame towards the bottom, where it appears to end at a set of wooden steps. The surrounding area is covered in green grass.

points worth noting

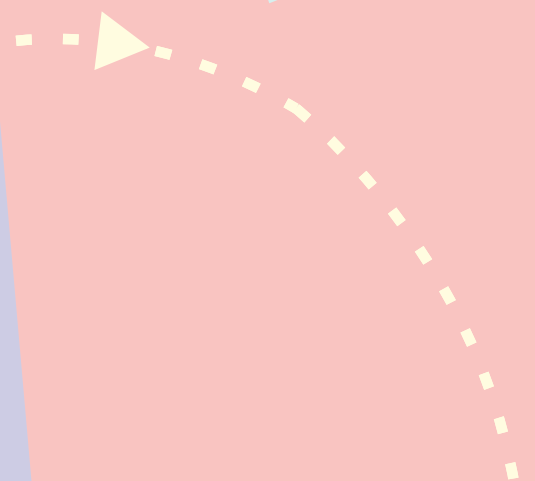
- **my “clear” lecture wasn’t very good**
- **discussion promoted “aha” moments**



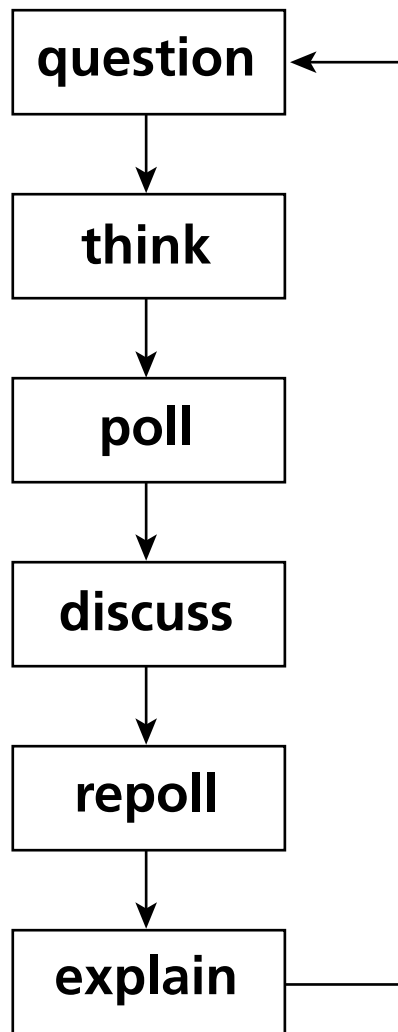
peer



back to pl



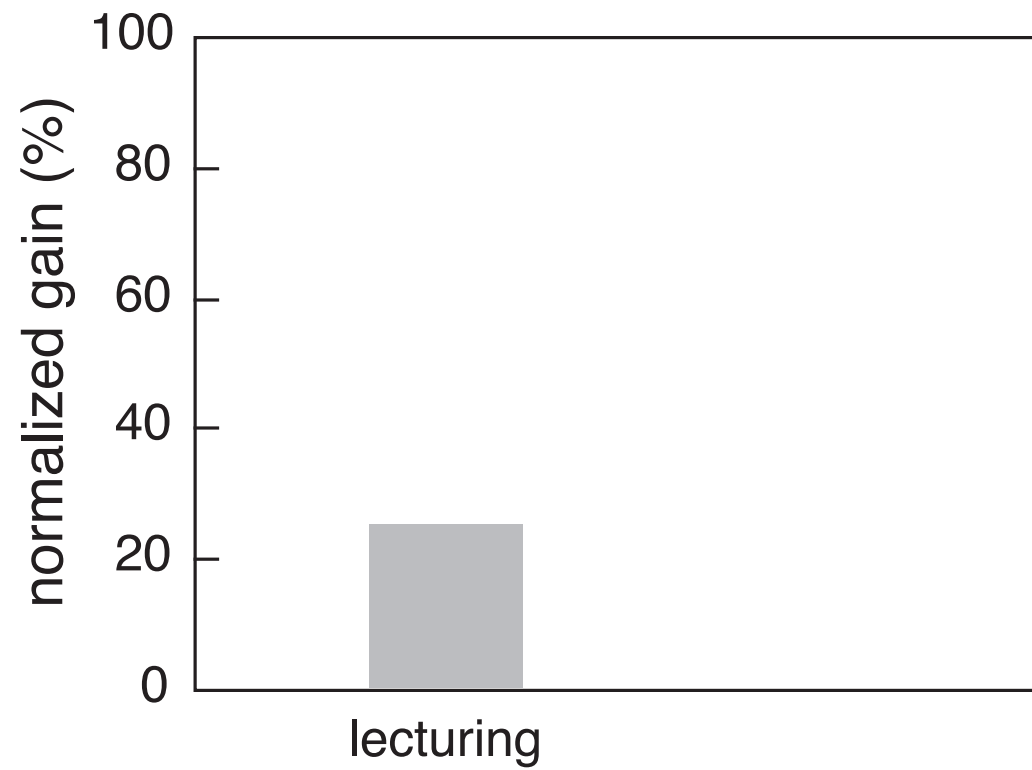
INSTRUCTION

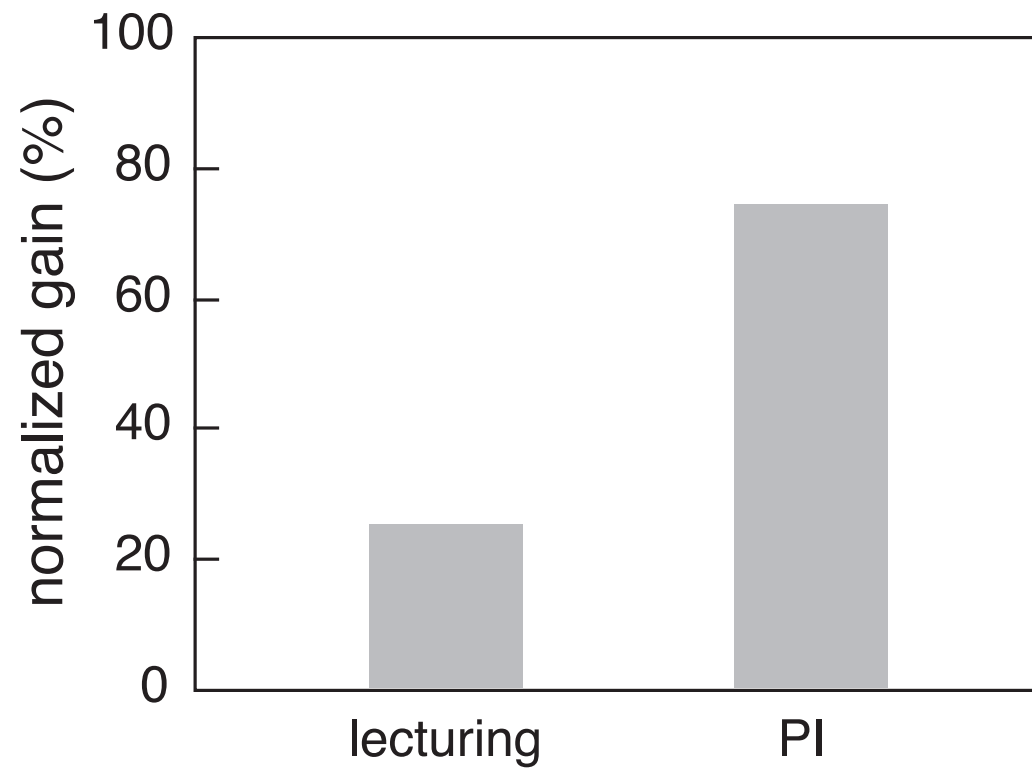




Higher learning gains

INSTRUCTION







Higher learning gains

Better retention

INSTRUCTION



Weekend long reads



© Graziano Pantili

Life & Arts

Yuval Noah Harari: the world after coronavirus

This storm will pass. But the choices we make now could change our lives for years to come

Yuval Noah Harari MARCH 20 2020



Save

Humankind is now facing a global crisis. Perhaps the biggest crisis of our generation. The decisions people and governments take in the next few weeks will shape the world for years to come. They will shape not just our lives but the lives of future generations. We must act



Many short-term emergency measures will become a fixture of life. That is the nature of emergencies. They fast-forward historical processes. Decisions that in normal times could take years of deliberation are passed in a matter of hours. Immature and even dangerous technologies are pressed into service, because the risks of doing nothing are bigger. Entire countries serve as guinea-pigs in large-scale social experiments. What happens when everybody works from home and communicates only at a distance? What happens when entire schools and universities go online? In normal times, governments, businesses and educational boards would never agree to conduct such experiments. But these aren't normal times.





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Yuval Noah Harari MARCH 20 2020

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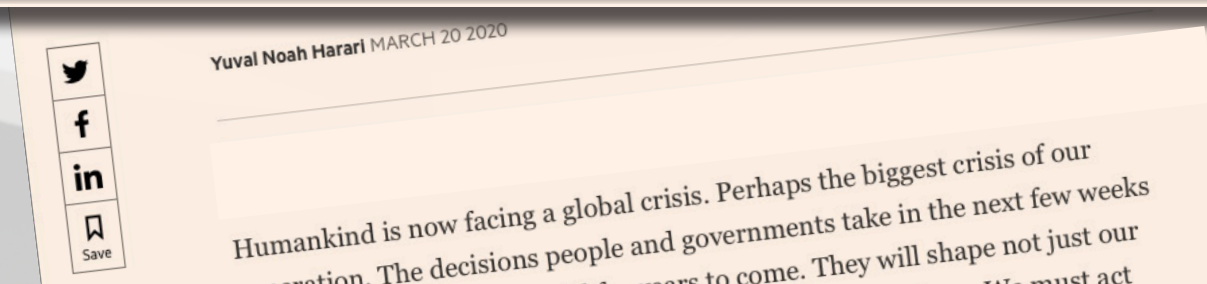


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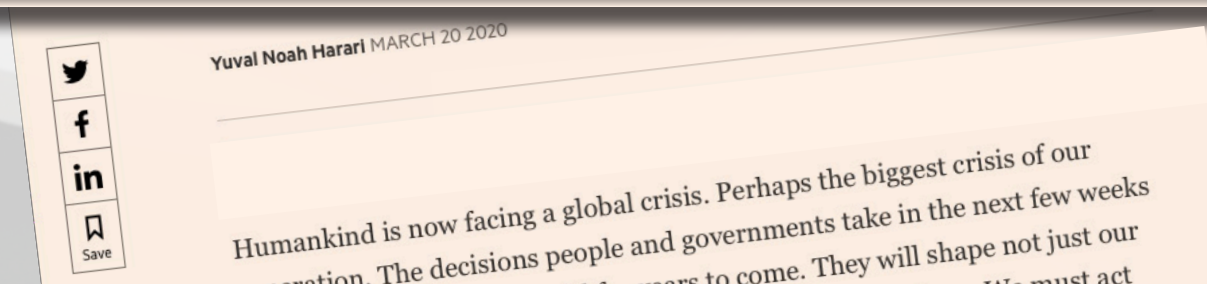


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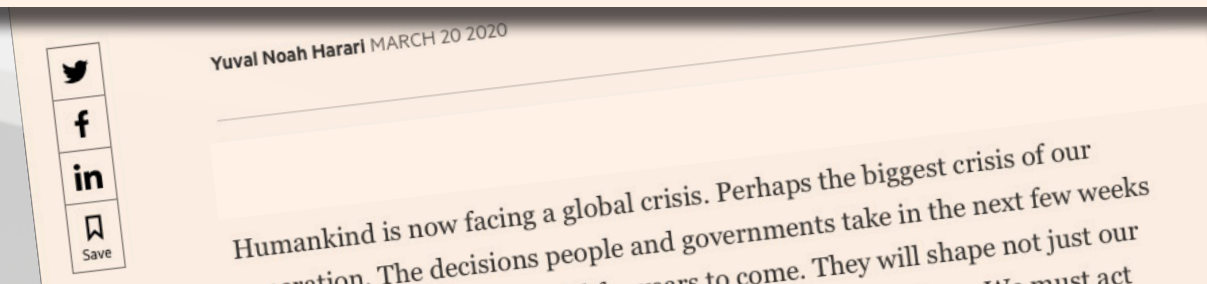




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Will online teaching become a fixture of life?

What happens when everybody works from home and communicates only at a distance? What happens when entire schools and universities go online? In normal times, governments, businesses and educational boards would never agree to conduct such experiments. But these aren't normal times.



lkbeat

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THE WALL STREET JOURNAL.

A photograph of a woman with long brown hair, wearing a green shirt and jeans, sitting on a tan sofa in a living room. She is looking at a laptop. To her left, a boy in a blue shirt and red shorts is sitting on the sofa, looking at a tablet. To her right, a boy in a red and blue plaid shirt and blue shorts is sitting on the sofa, looking at a tablet. In the foreground, a girl in a white dress and blue headband is standing, looking down. Another boy in a red shirt is sitting on the floor in the foreground. The living room has two lamps, a coffee table with a blue tablet, and a patterned rug.

The Results Are In for Remote Learning: It Didn't Work

The pandemic forced schools into a crash course in online education. Problems piled up quickly. 'I find it hectic and stressful'

Lucia Curatolo-Boylan supervises the online schooling of her four children, ages 4 to 10, in Staten Island, N.Y. KEVIN HAGEN FOR THE WALL STREET JOURNAL

by Howard and Lee Hawkins

lkbeat

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THE WALL STREET JOURNAL.



Popular

Latest

The Atlantic

IDEAS

Remote Learning Is a Bad Joke

My kid can't handle a virtual education, and neither can I.

AUGUST 18, 2020

Emily Gould

Author and essayist



RECOMMEN
READING

Put Anthony Fauci in
Dunk Tank

CONOR FRIEDERSDORF

Why Millennials Can
Up

A group of students are seated around a white circular table in a classroom or meeting room. Several laptops are open on the table, and a notebook with a yellow pencil lies in the foreground. The students are engaged in discussion or work. The background shows more students and a large window. The text "The reason? Bad pedagogy!" is overlaid in the center of the image.

The reason? Bad pedagogy!



**information
transfer**

sense-making

Traditional model

class

**information
transfer**

home

sense-making

Traditional model

class

**information
transfer**

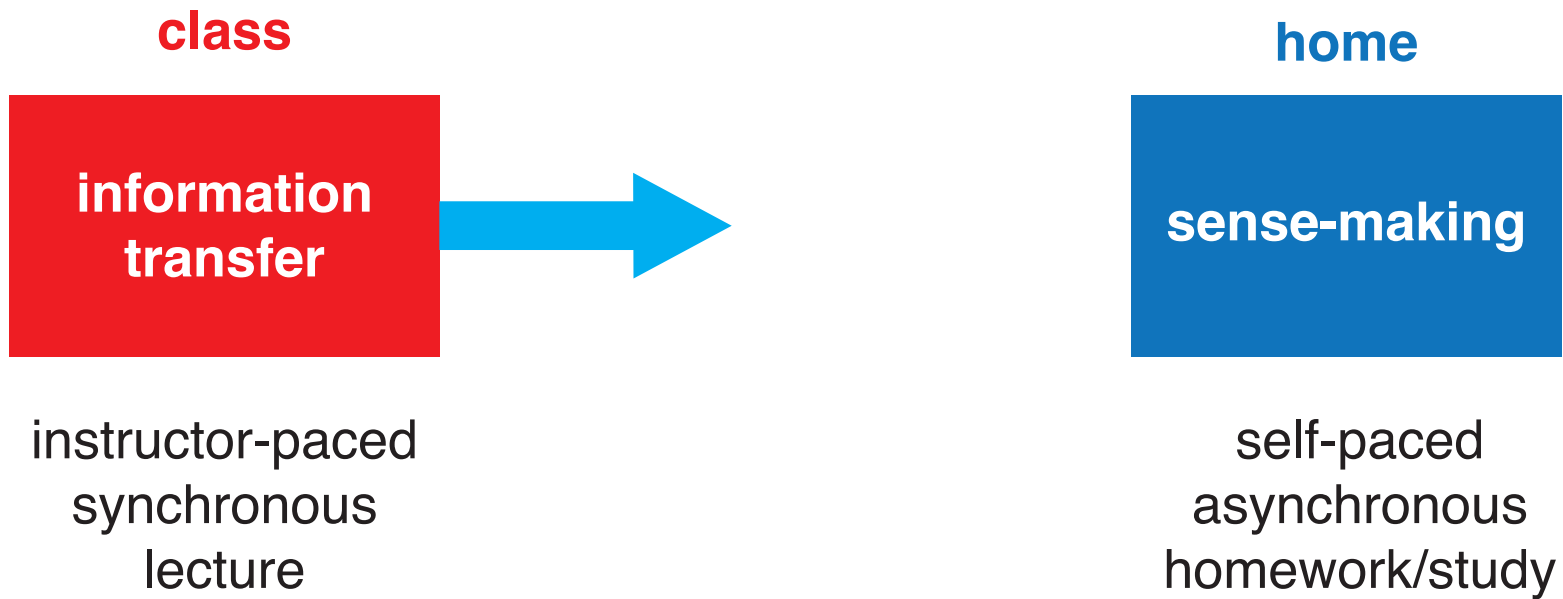
instructor-paced
synchronous
lecture

home

sense-making

self-paced
asynchronous
homework/study

Traditional model online



Traditional model online

class

information
transfer

instructor-paced
synchronous
lecture

home

information
transfer

instructor-paced
synchronous
online lecture

home

sense-making

self-paced
asynchronous
homework/study

Traditional model online

class

information
transfer

instructor-paced
synchronous
lecture

home

information
transfer

instructor-paced
asynchronous
recorded lecture

home

sense-making

self-paced
asynchronous
home work/study

Traditional model online

class

information
transfer

instructor-paced
synchronous
lecture

home

information
transfer

instructor-paced
asynchronous
recorded lecture

home

sense-making

self-paced
asynchronous
home work/study

all alone!

A group of people are working in a modern office environment. In the foreground, a woman with blonde hair is looking at a laptop screen. Next to her, a woman with dark hair is looking down at a notebook. In the background, several other people are working at desks with laptops. The office has large windows and a bright, open atmosphere.

Small wonder!

Traditional model

class

**information
transfer**

home

sense-making

Flipped model

home

**information
transfer**

class

sense-making

Flipped model

home

**information
transfer**

self-paced
asynchronous

class

sense-making

instructor-led
synchronous
& **interactive**

Flipped model

home

information
transfer

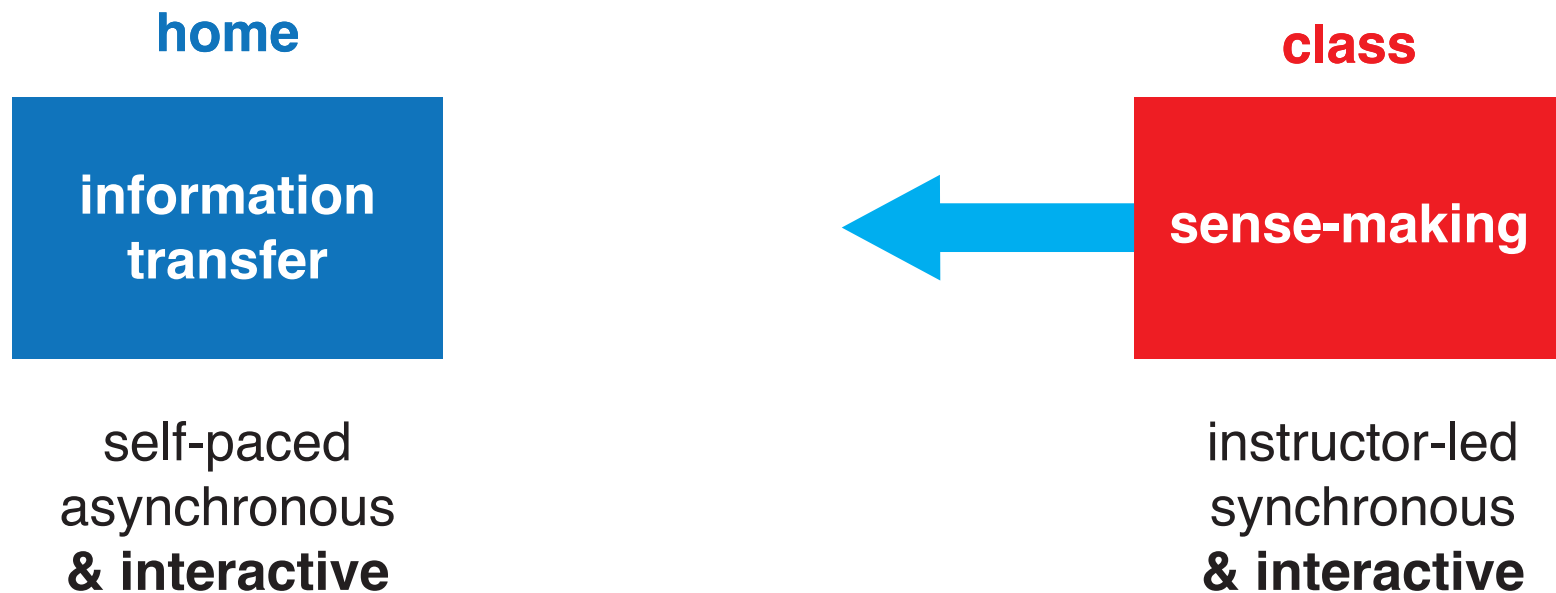
self-paced
asynchronous
& **interactive**

class

sense-making

instructor-led
synchronous
& **interactive**

Flipped model online



Flipped model online

home

**information
transfer**

self-paced
asynchronous
& **interactive**

home

sense-making

instructor-led
synchronous
& **interactive**

class

sense-making

instructor-led
synchronous
& **interactive**

Flipped model online





Education is not just about:

- **transferring information**
- **getting students to do what we do**



Education is not just about:

- **transferring information**
- **getting students to do what we do**

active engagement/social interaction a must!

ericmazur.com

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