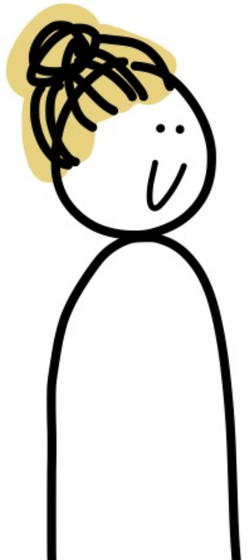
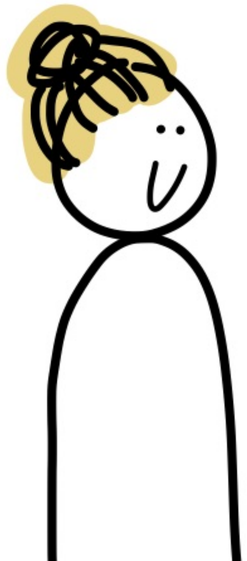
Felienne Hermans

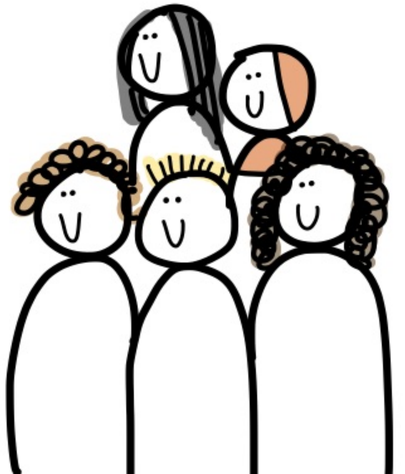


Vrije Universiteit Amsterdam

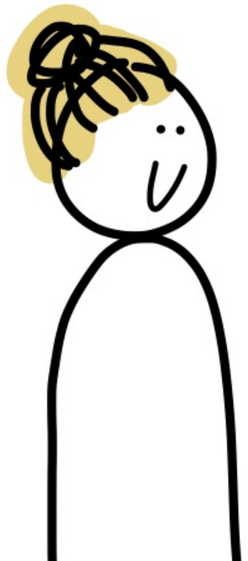
Felienne Hermans

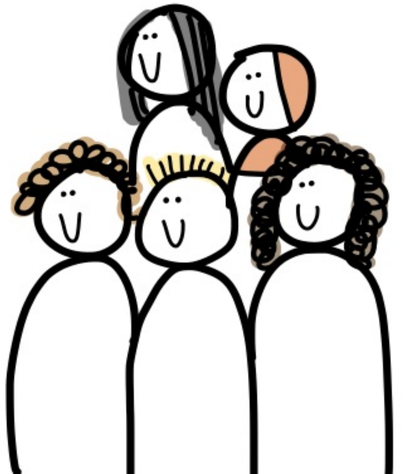
Teacher





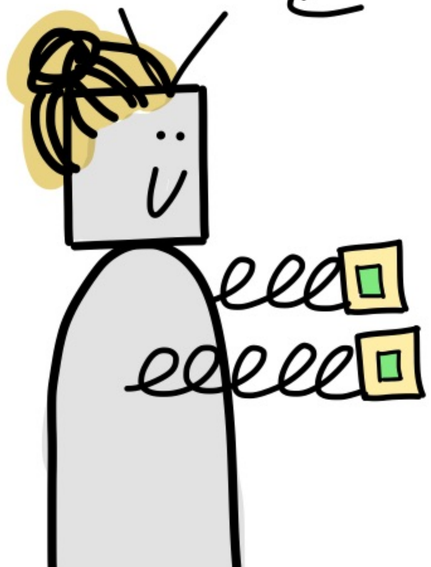
Teacher

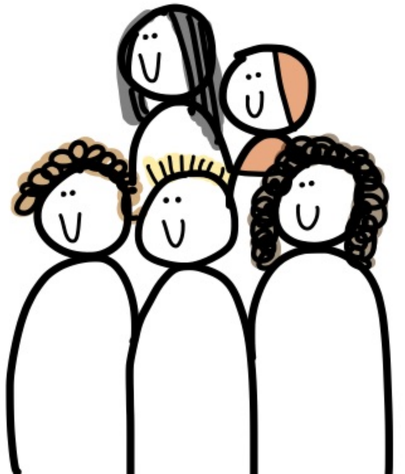




"The simple fact is...

Teachers are out of date"





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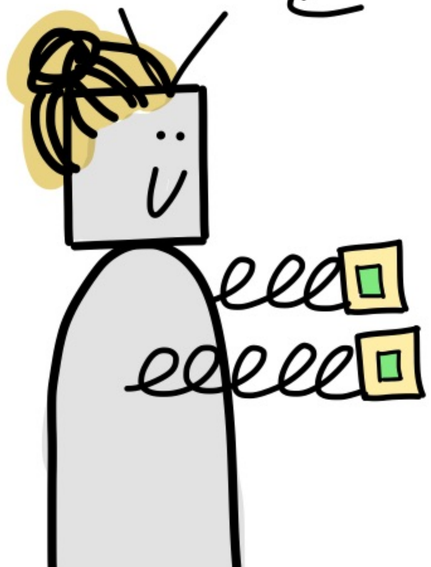
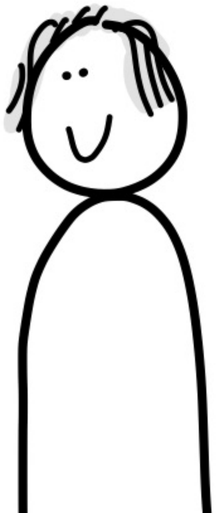


B.F. Skinner →



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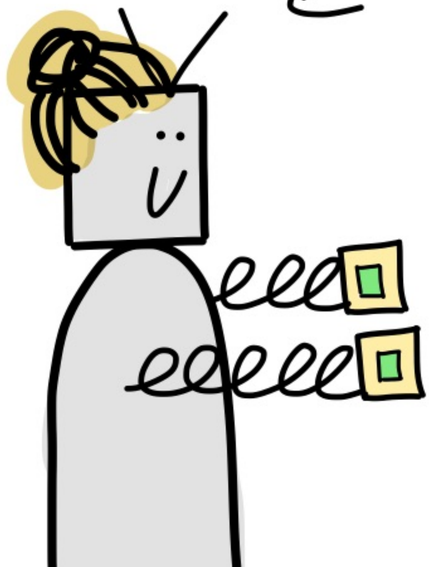
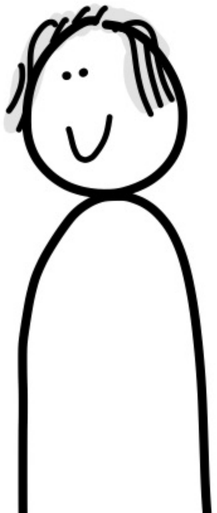
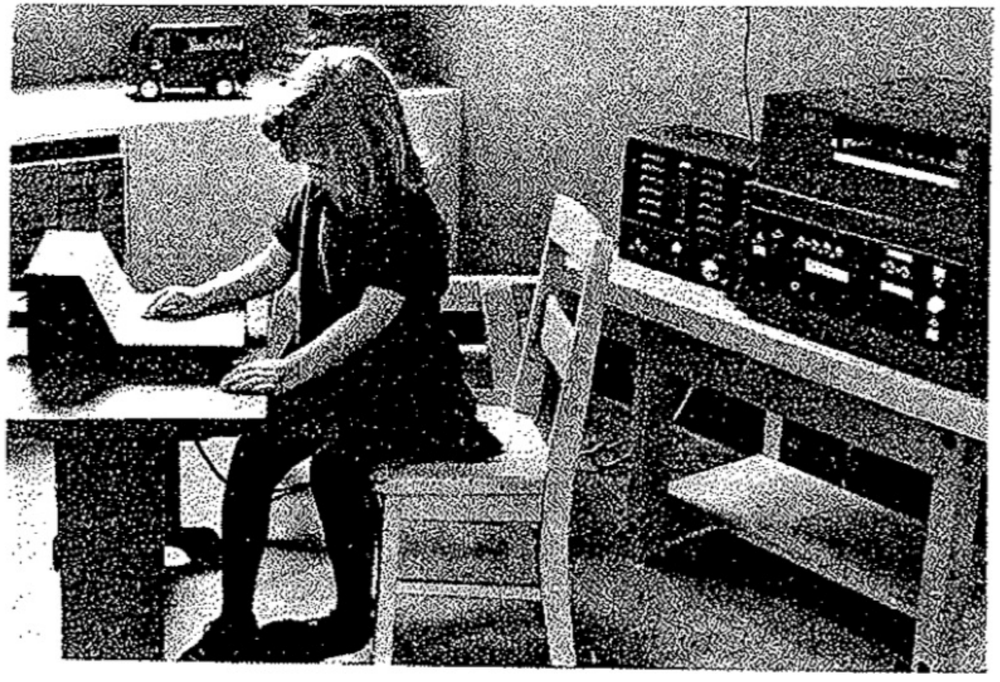
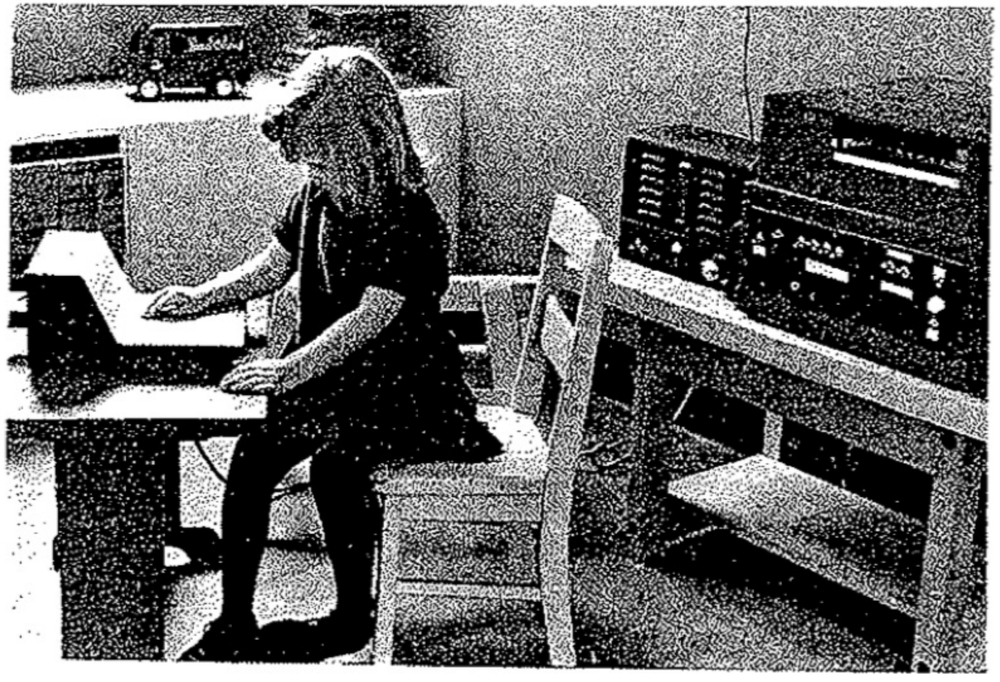


B.F. Skinner
1954

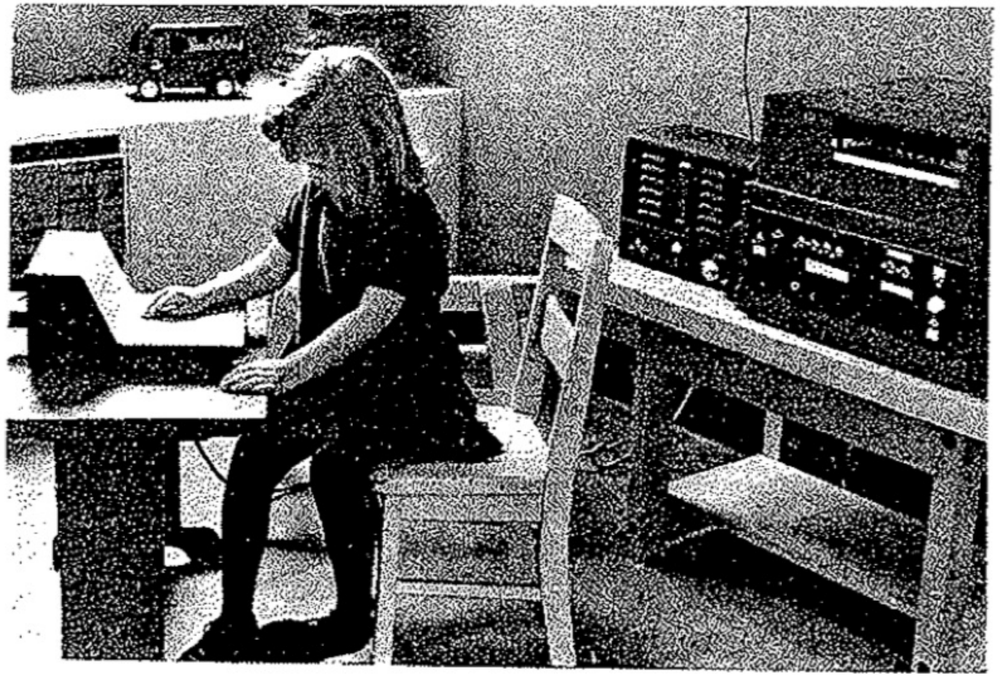






Will Rapport

FIGURE 10. A machine to teach "a good sense of rhythm." The child presses a button in unison with a series of clicks, presented at different speeds and in different patterns. Coincidences are reported by a flashing light. The machine can adjust the tolerance which defines a coincidence.



Will Rapport

FIGURE 10. A machine to teach "a good sense of rhythm." The child presses a button in unison with a series of clicks, presented at different speeds and in different patterns. Coincidences are reported by a flashing light. The machine can adjust the tolerance which defines a coincidence.

FIGURE 11. A machine to teach "musical thinking." The machine plays single notes, intervals, melodies, and so on. Keys may be lighted to indicate a set from which matching choices are to be made. Incorrect keys are silent. Correct matches may be reinforced additionally through the operation of the dispenser on the top of the machine which delivers tokens, candies, or coins.

Will Rapport

A brief history of technology in education

"

... is going to radically change the school system"

A brief history of technology in education

"Radio is going to radically change the school system"

1920

A brief history of technology in education

"TV is going to radically change the school system"

1940

A brief history of technology in education

"Video is going to radically change the school system"

1960

A brief history of technology in education

"The CD is going to radically change the school system"

1980

not so

A brief history of technology in education

"Internet is going to radically change the school system"

2000

not so

A brief history of technology in education

"MOOCs are going to radically change the school system"

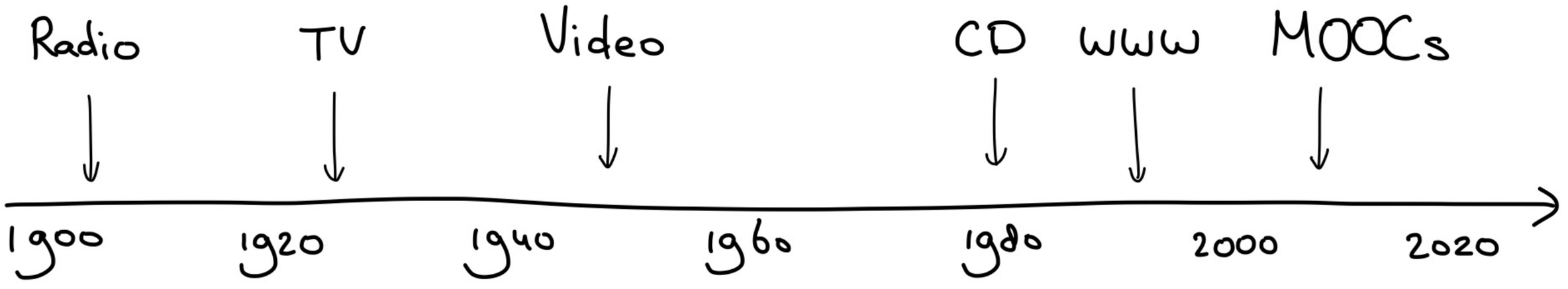
2010

not so

A brief history of technology in education

"GenAI is going to radically change the school system"

2020


Radio
TV
Video
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WWW
MOOCs
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1940
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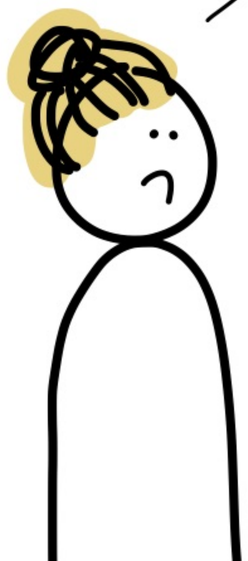
"GenAI is going to radically change the school system"

Really?



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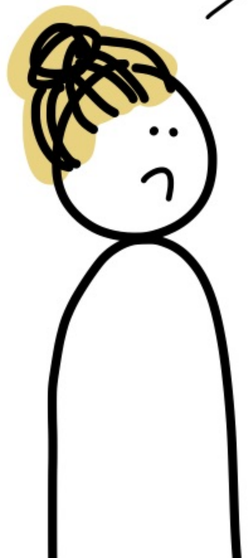
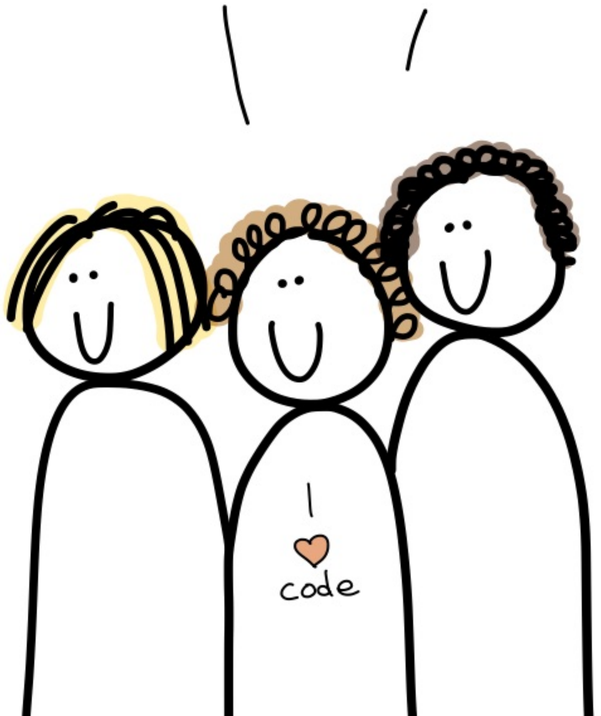


This is different!

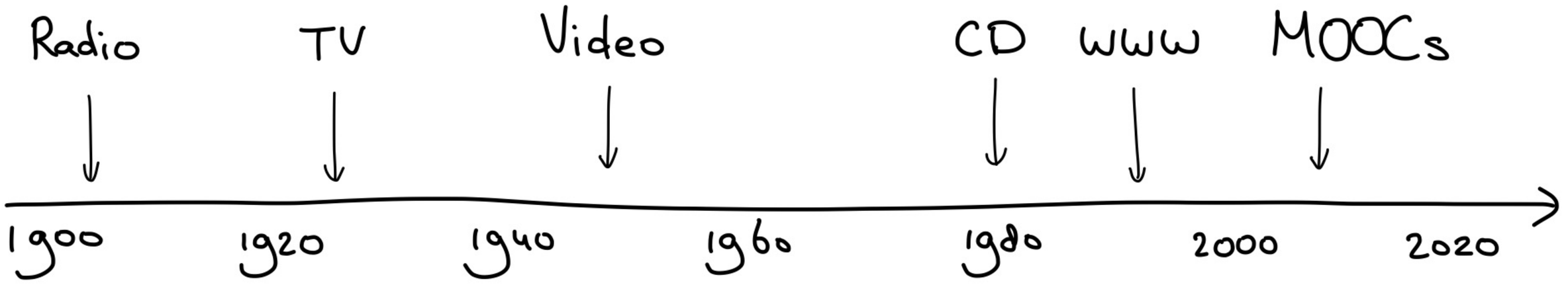


"GenAI is going to radically change the school system"

Really?

This is different!

It's personalized!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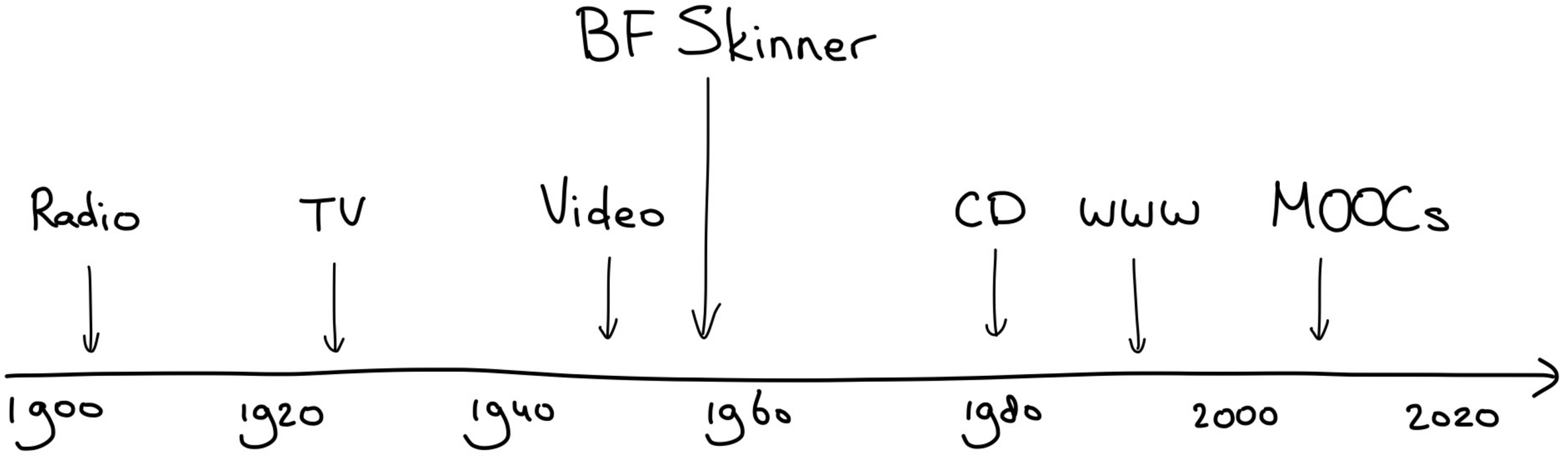
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Sidney Pressey said that too!

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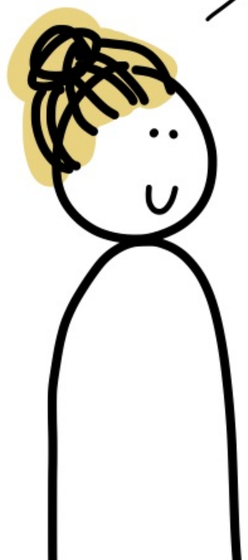

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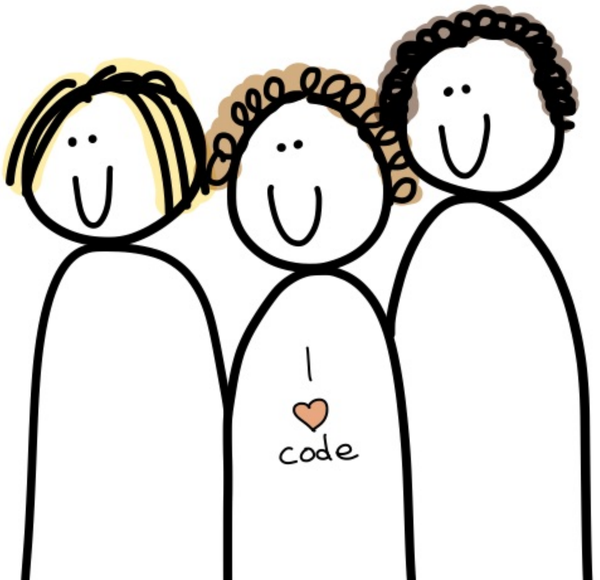
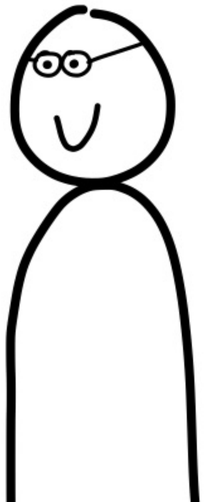
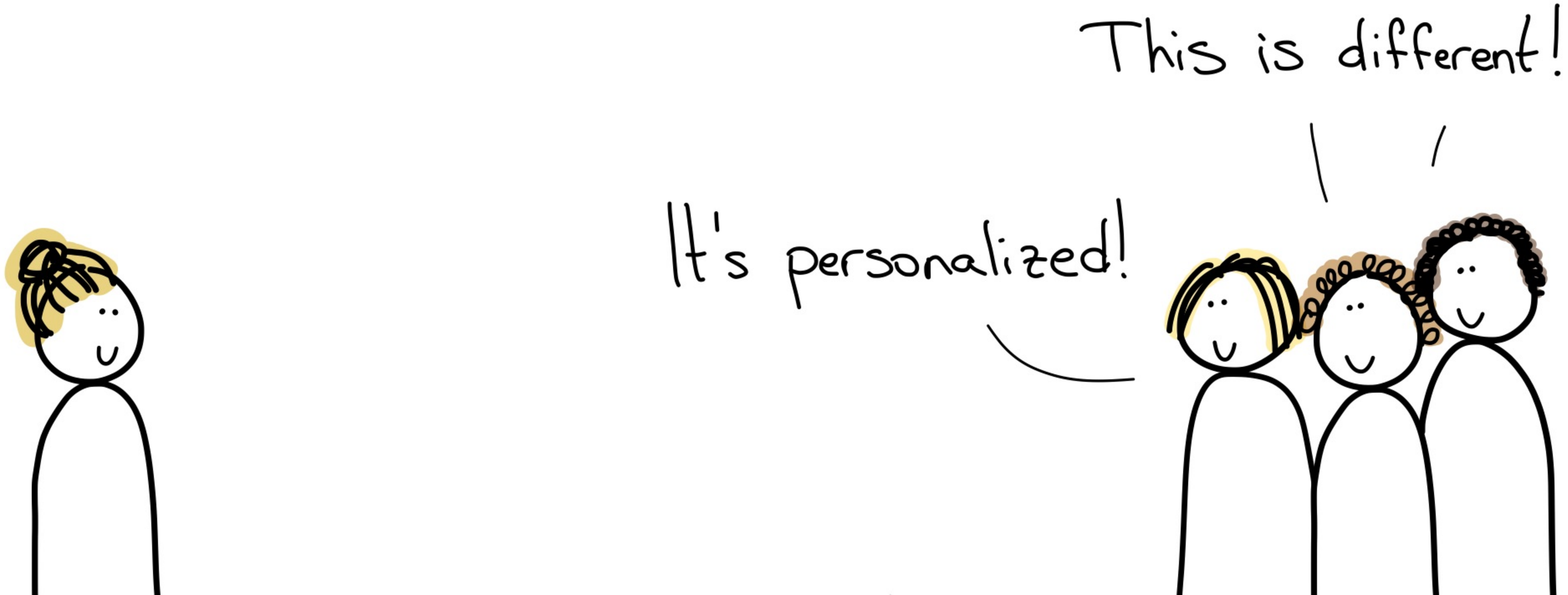


"Unlike mass media, my system is individualized."

Sydney Pressey → 1926

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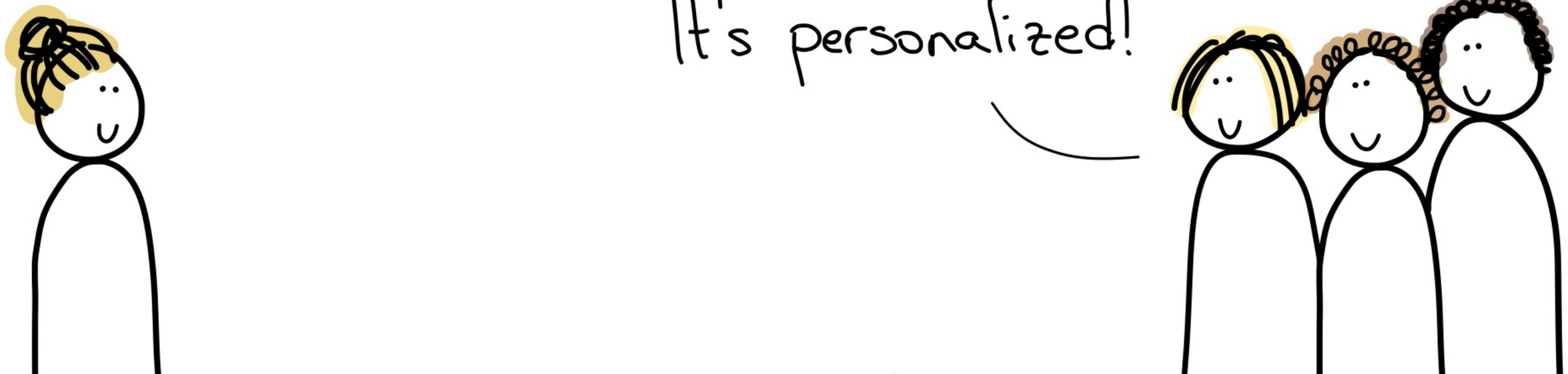
Teachers are so conservative!
This is different!
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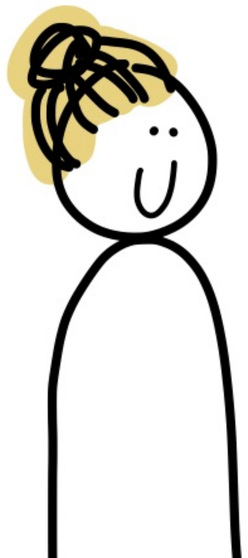
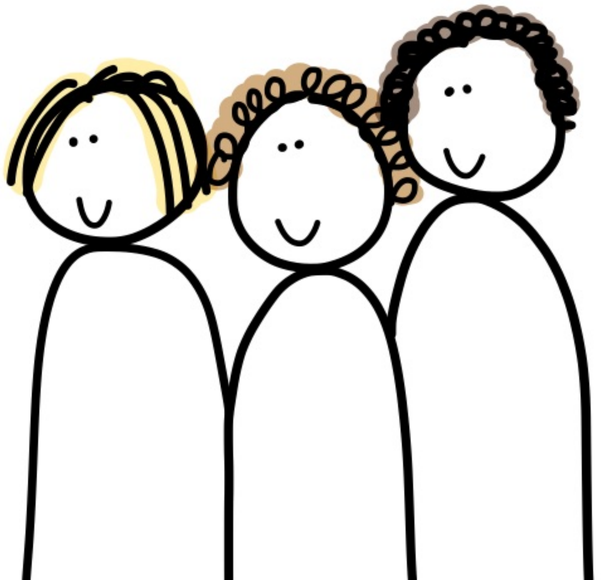
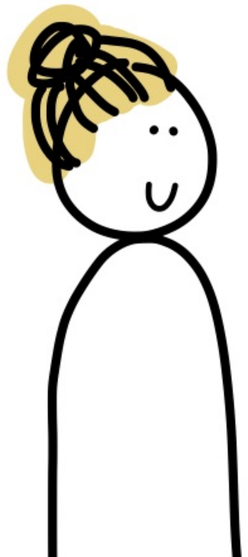
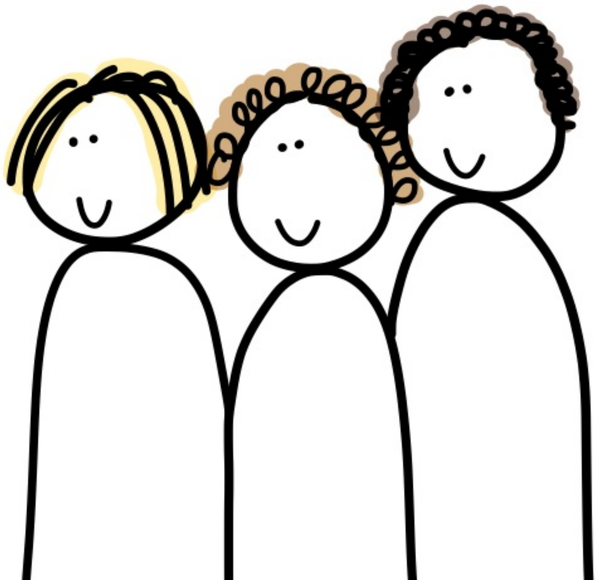




"Schools don't want automation.
They are too conservative."

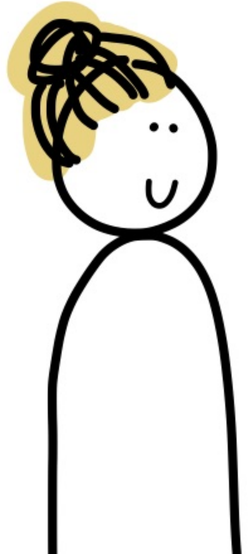


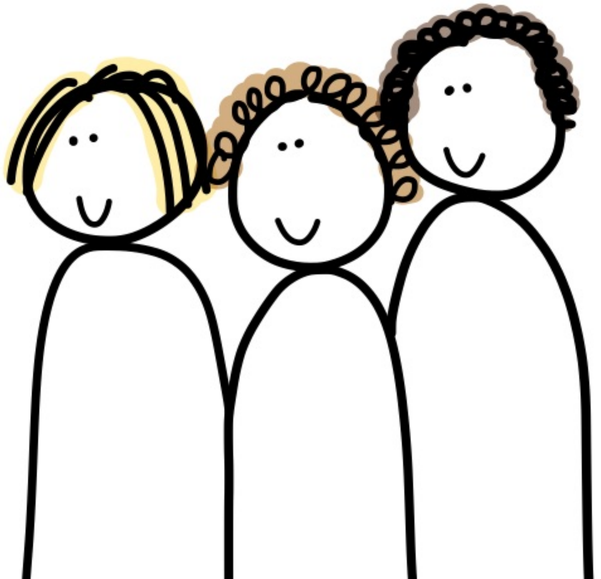
Teachers are so conservative!



But... the pandemic?

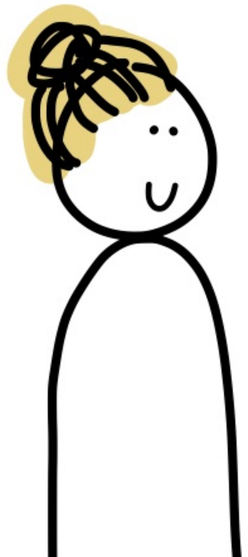
Teachers are so conservative!

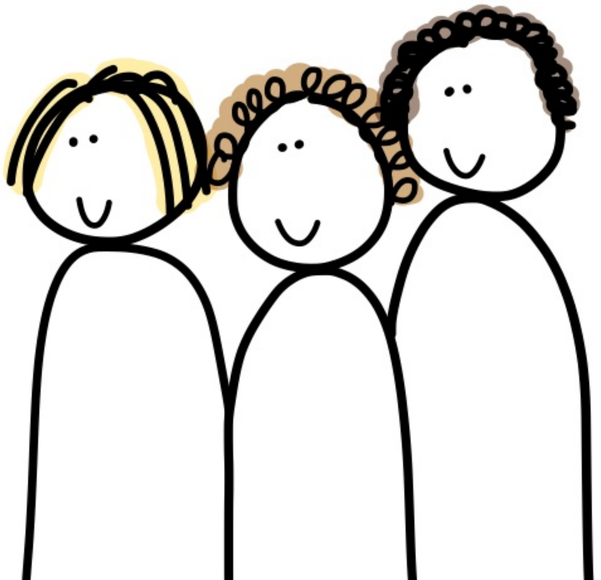




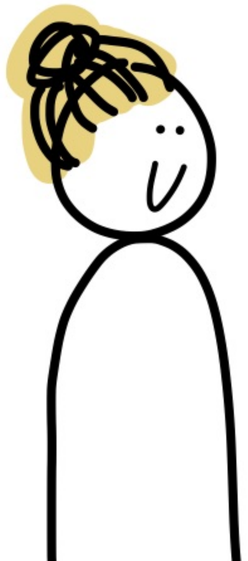
MEWZ
Volkswagen

Gen AI can think!!



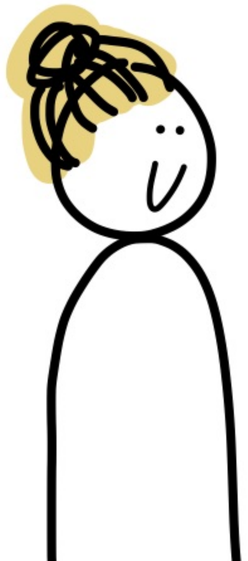


Generative AI



Generative AI

Artificial Intelligence

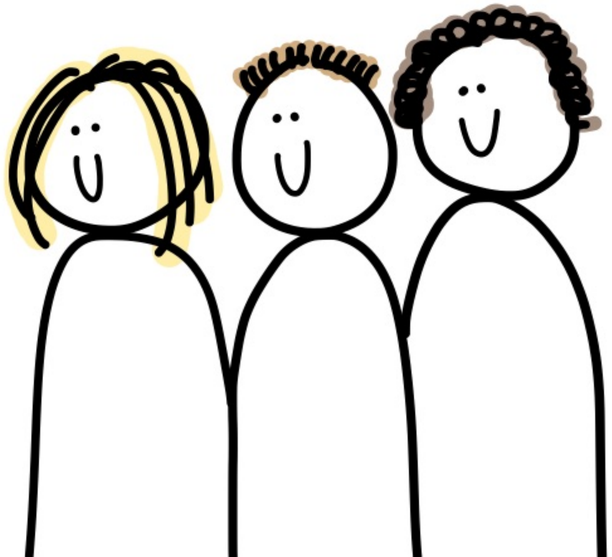


Generative AI

The big bad ...

Generative AI

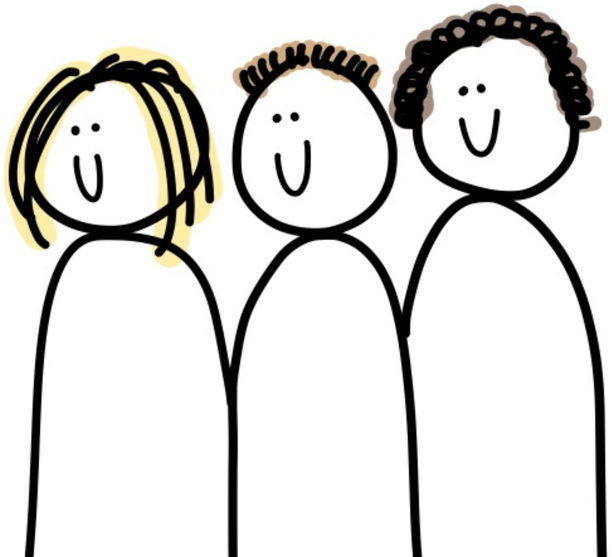
The big bad ...



Generative AI

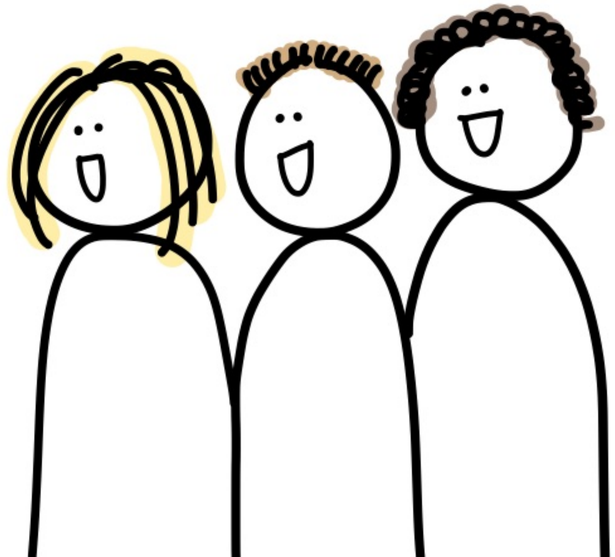
The big bad ...

... wolf

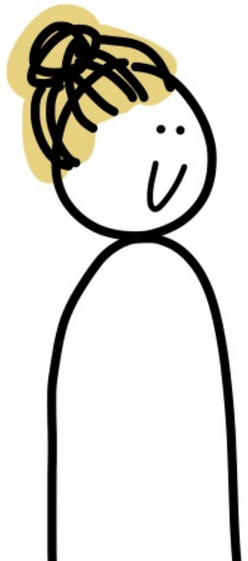


Generative AI

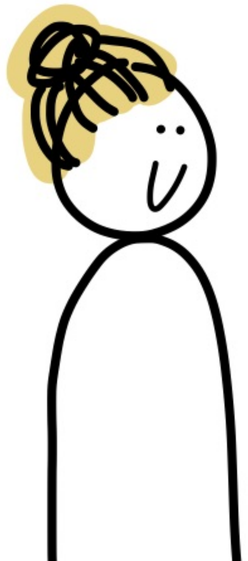
Now you understand GPT



The big bad ... {

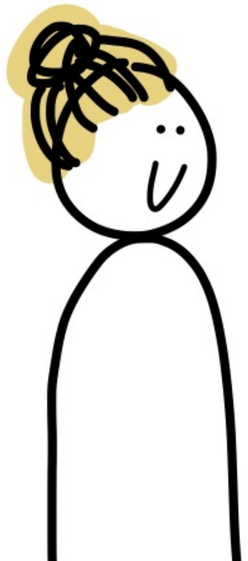


The big bad ... { wolf 80%



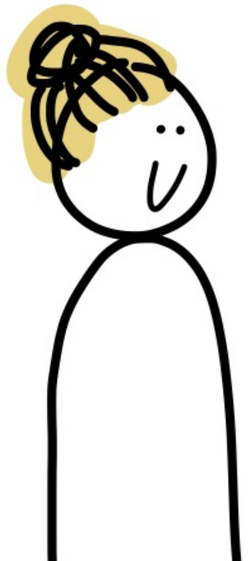
The big bad ...

- wolf 80%
- boss
- enemy

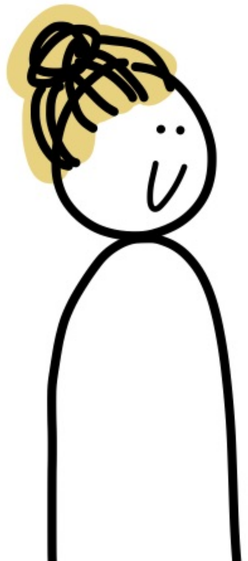


The big bad ...

- wolf 80%
- boss 15%
- enemy 5%



Large Language Model



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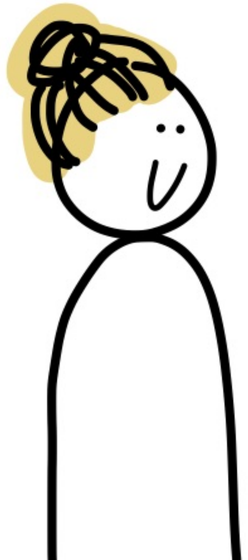
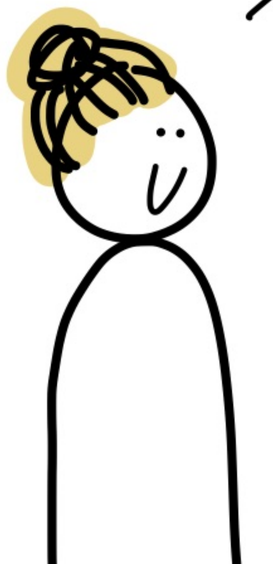


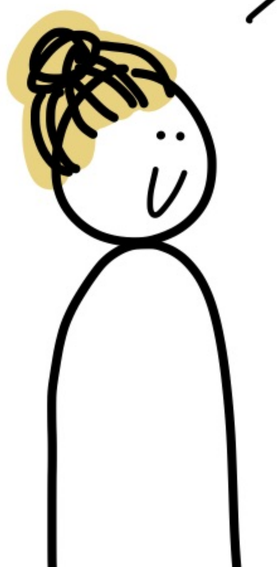
~~Large Language Model~~

Language Continuation Model



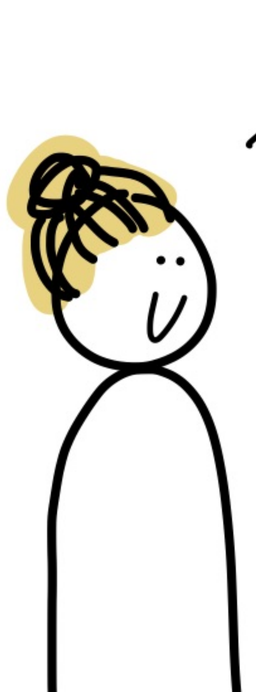
Large Language Model

Language Continuation Model



The big bad... {
- wolf 80%
- boss 15%
- enemy 5%
}

Language Continuation Model

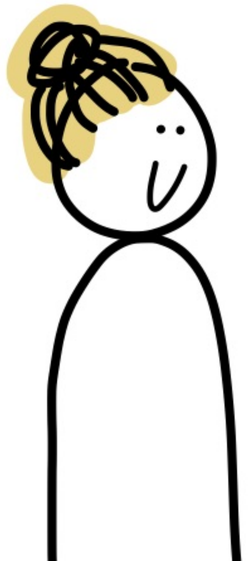


The big bad...

wolf	80%
boss	15%
enemy	5%

WWW

The Big Bad Wolf, also known as **Zeke Midas Wolf** or **Br'er Wolf**, is a fictional character from Walt Disney's cartoon short *Three Little Pigs*, directed by Burt Gillett and first released on May 27, 1933. The Wolf's voice was provided by Billy Bletcher. As in the folktale, he was a cunning and threatening menace. The short also introduced the Wolf's theme song, "Who's Afraid of the Big Bad Wolf?", written by Frank Churchill.



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enemy	5%

www
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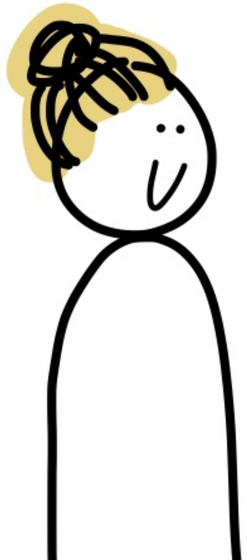
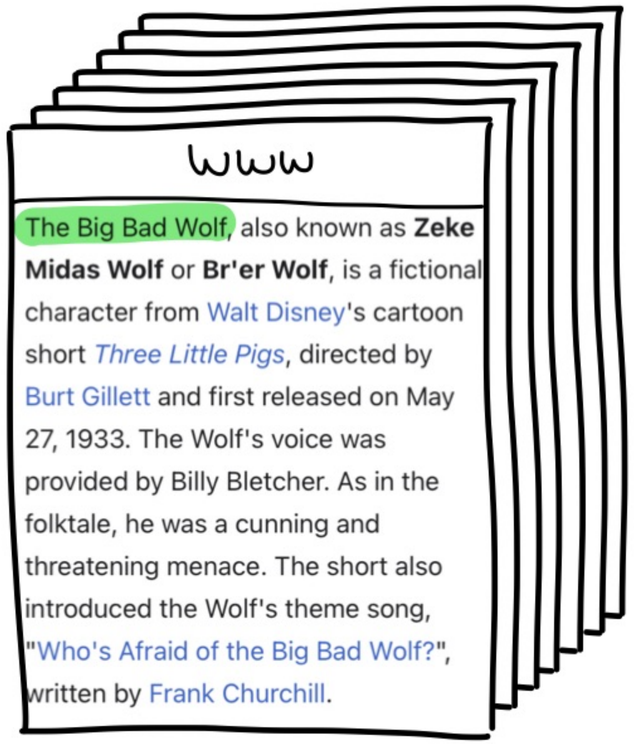


The big bad...
wolf 80%
boss 15%
enemy 5%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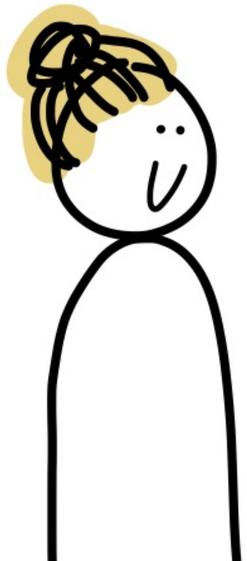
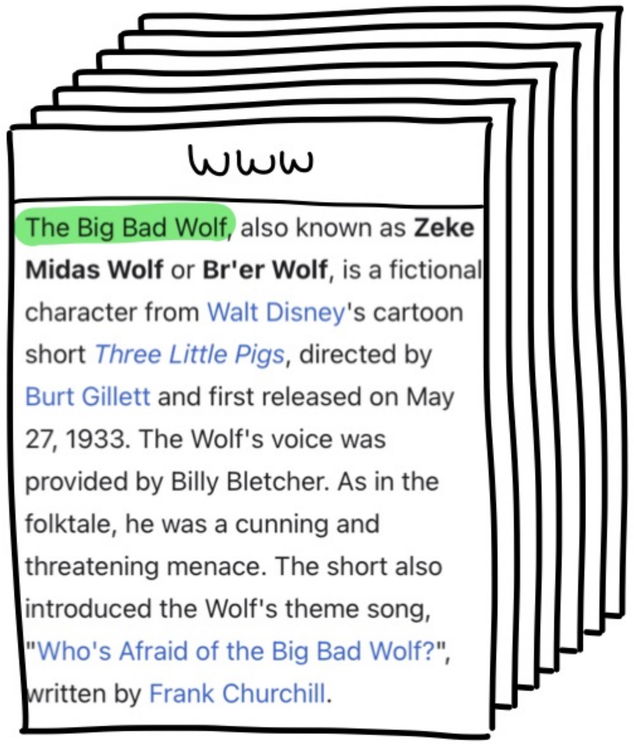


The big bad...
wolf
boss
enemy
5%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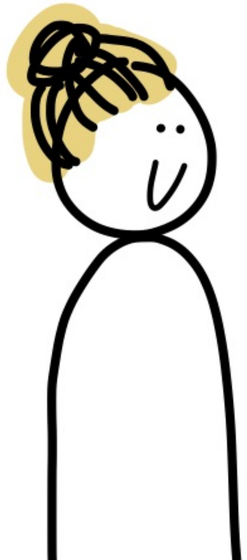

The big bad...
wolf 81%
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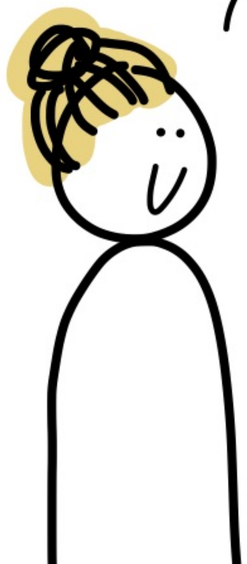
enemy 5%

This is Artificial Intelligence



Symbolic Artificial Intelligence

Symbolic

Duck $\in$ Bird

Symbolic

$Duck \in Bird$

$\forall Bird \Rightarrow flies$

Symbolic

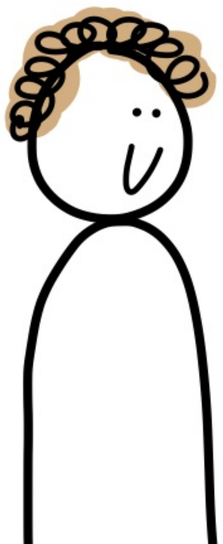
$$\frac{Duck \in Bird \qquad \forall Bird \Rightarrow flies}{}$$

Symbolic

$$\frac{\begin{array}{l} Duck \in Bird \\ \forall Bird \Rightarrow flies \end{array}}{Duck \quad flies}$$

Symbolic

Can we guarantee reasoning skills?



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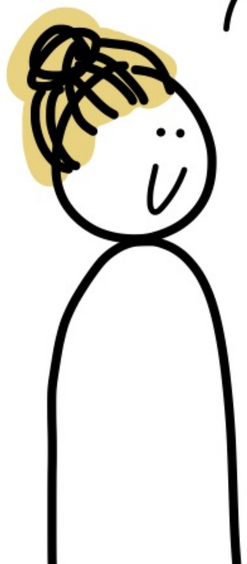

How often does a occur in ginger?

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The letter "a" occurs twice in the word "ginger."

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I don't think that is correct...?

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"Ginger"

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Maybe I am wrong. But if there is one a, could you point the a out to me?

I apologize for any confusion earlier. It appears that I made a mistake in my previous responses. The word "ginger" does not contain the letter "a." Thank you for bringing this to my attention, and I appreciate your patience. If you have any more questions or need assistance with anything else, please feel free to ask.

AI

$$\frac{\begin{array}{l} Duck \in Bird \\ \forall Bird \Rightarrow flies \end{array}}{Duck \quad flies}$$

AI

$$\frac{\text{Duck} \in \text{Bird} \qquad \forall \text{Bird} \Rightarrow \text{flies}}{\text{Duck flies}}$$

Also AI

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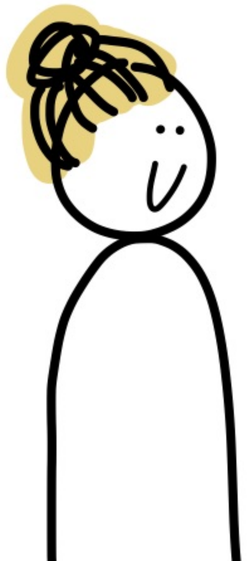
Category Error

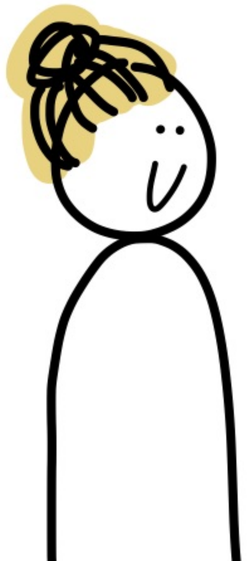
Artificial

Intelligence

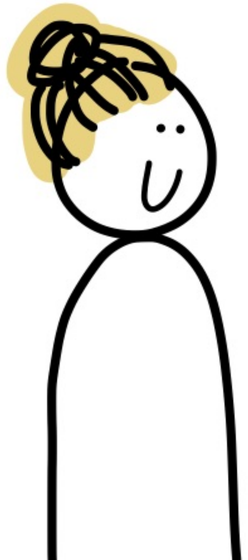


Artificial

Intelligence ?



Language Continuation Model



Language Continuation Model

It can continue... language!

Language Continuation Model

It can continue... language!

surprisingly well

Language Continuation Model

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surprisingly well

Language Continuation Model

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surprisingly well

Could you still be wrong?

Language Continuation Model

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The big bad...

wolf	80%
boss	15%
enemy	5%

Language Continuation Model

It can continue... language!

Language Continuation Model

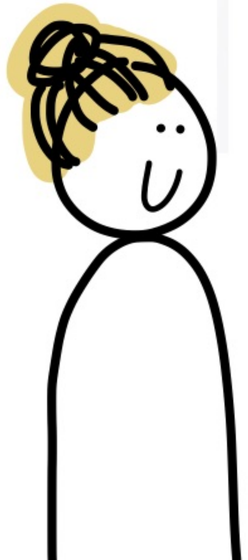
It can't ~~reason~~

Language Continuation Model

It can't ~~reason~~ reliably

Language Continuation Model

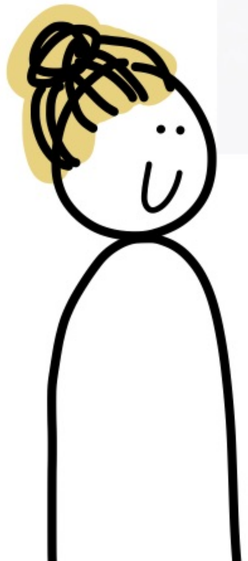
How many e's are in Felienne



Language Continuation Model

How many e's are in Felienne

There are three occurrences of the letter 'e' in the name "Felienne."

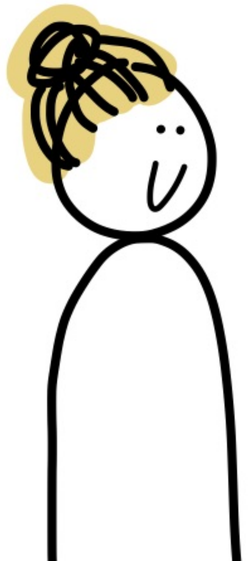


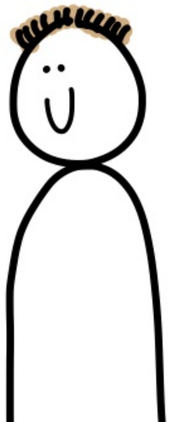
Language Continuation Model

It can't ~~think~~

Language Continuation Model

"Chinese room"





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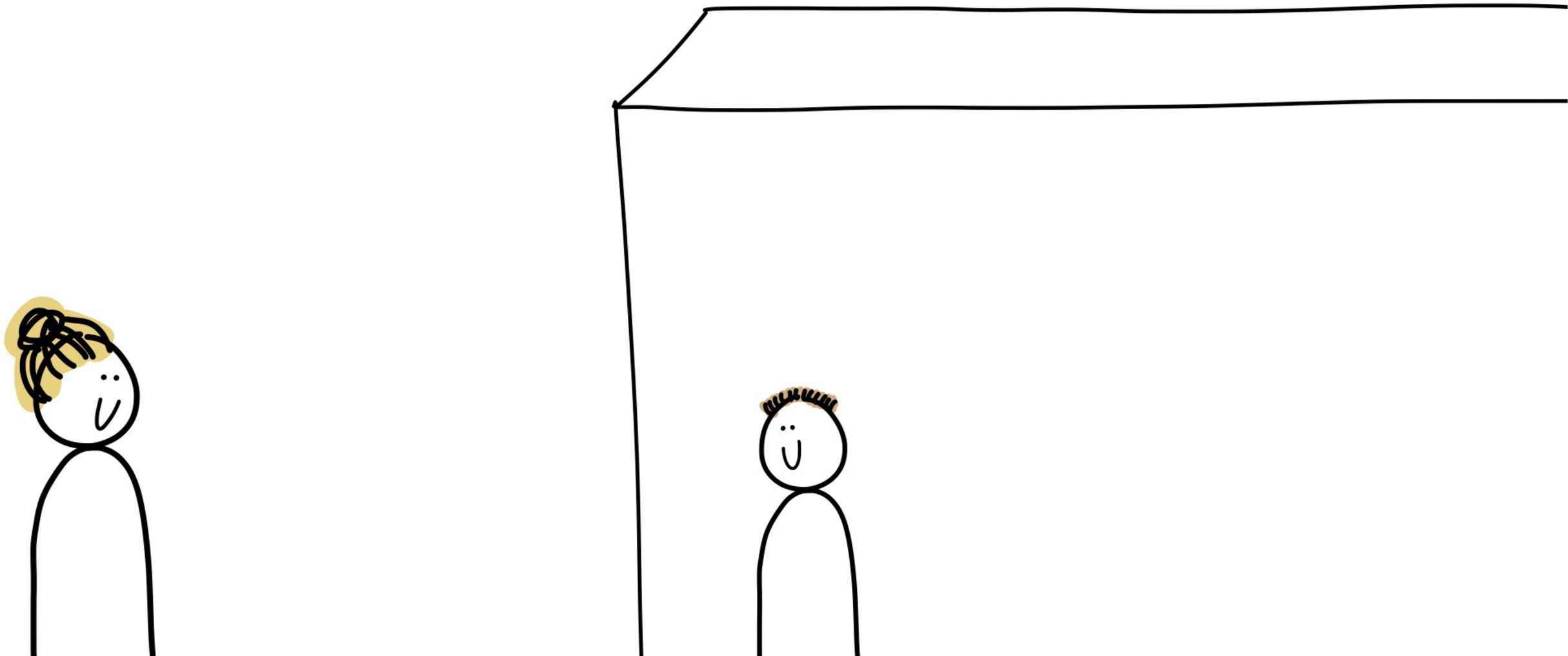

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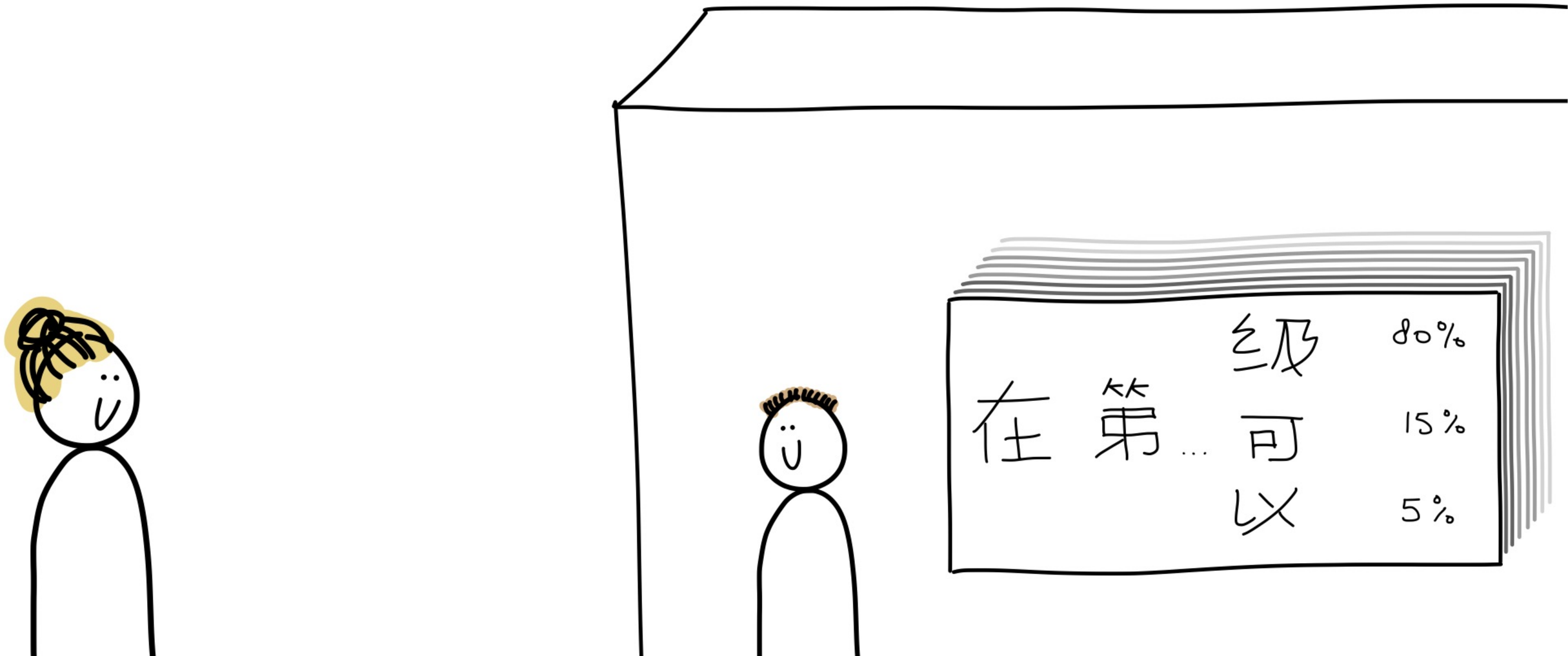

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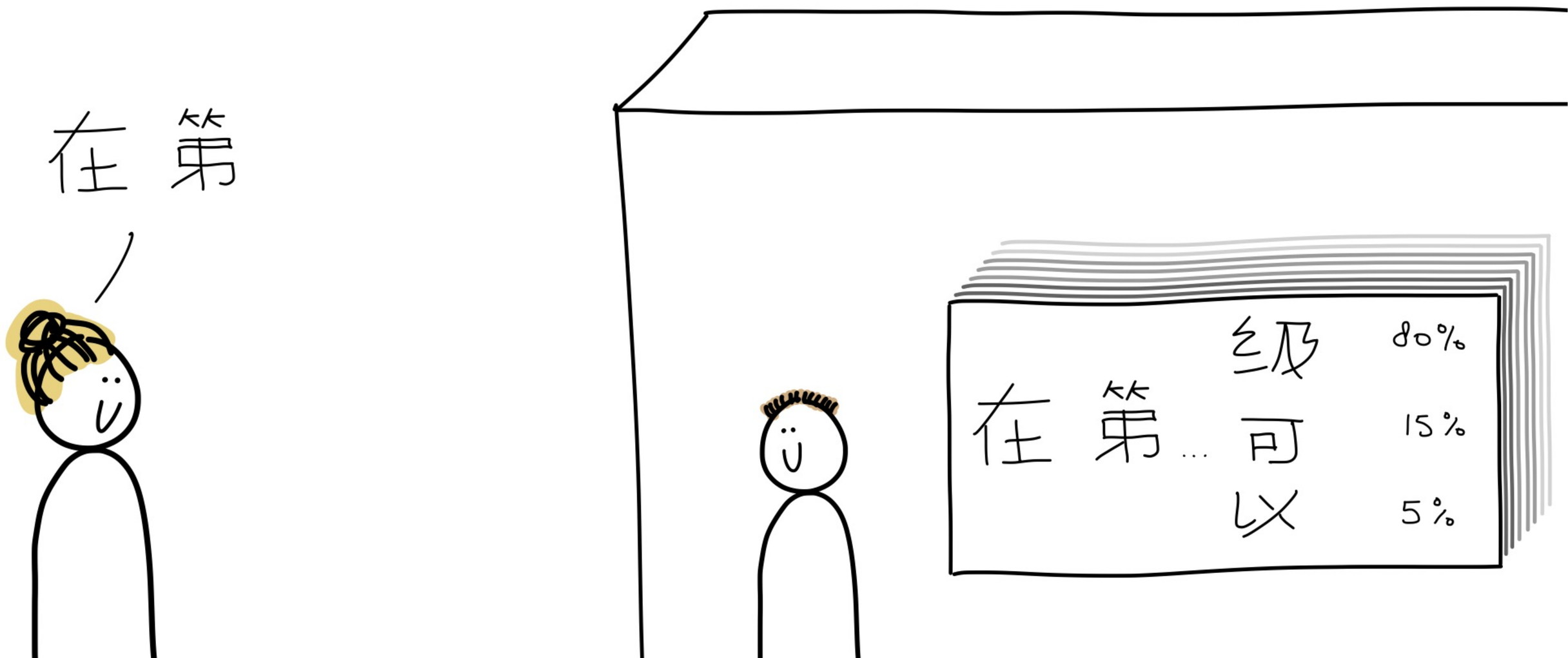

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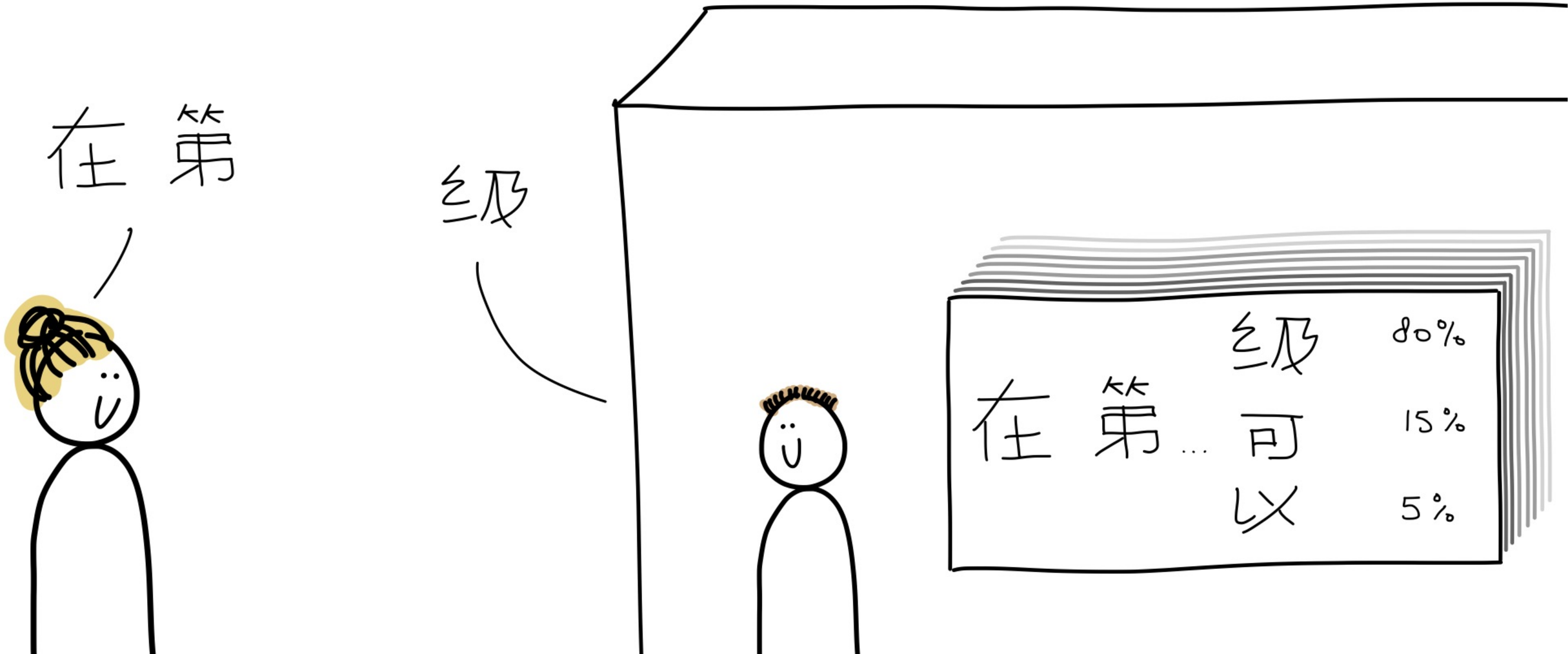

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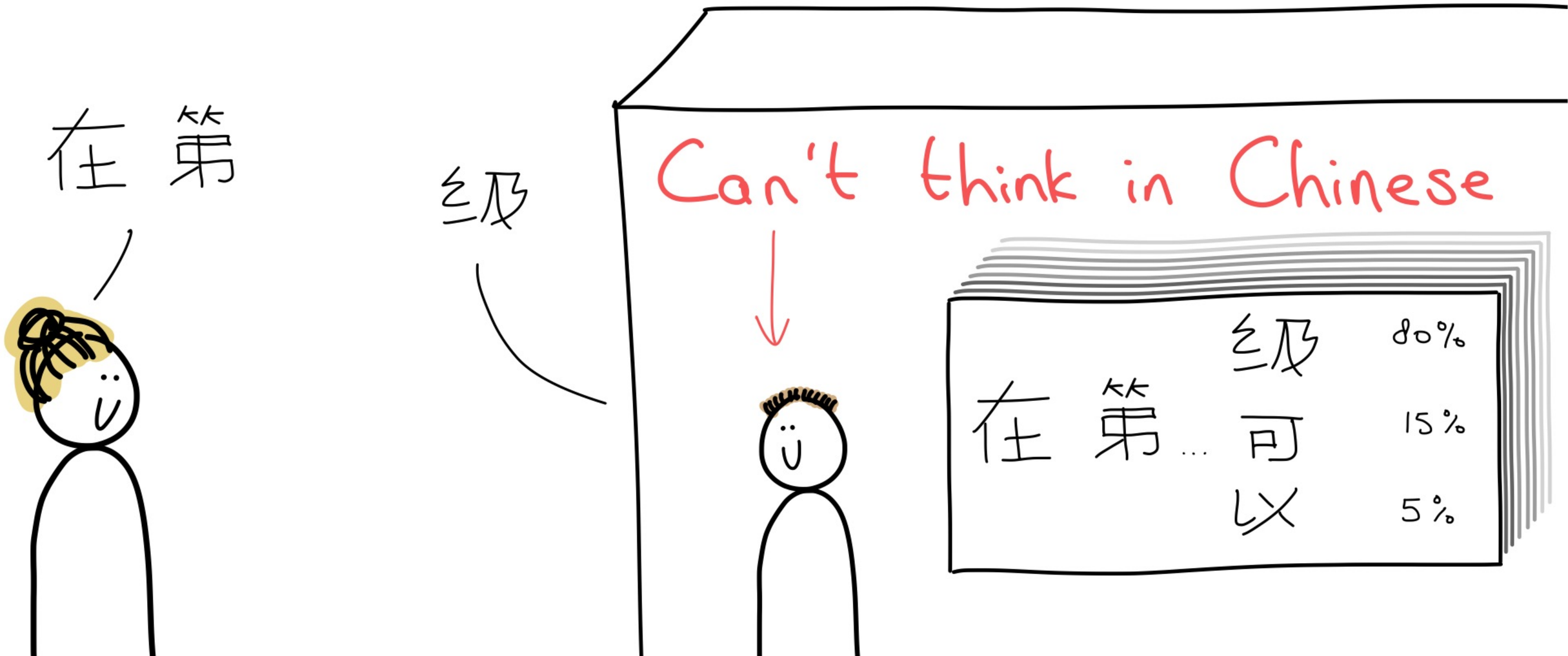

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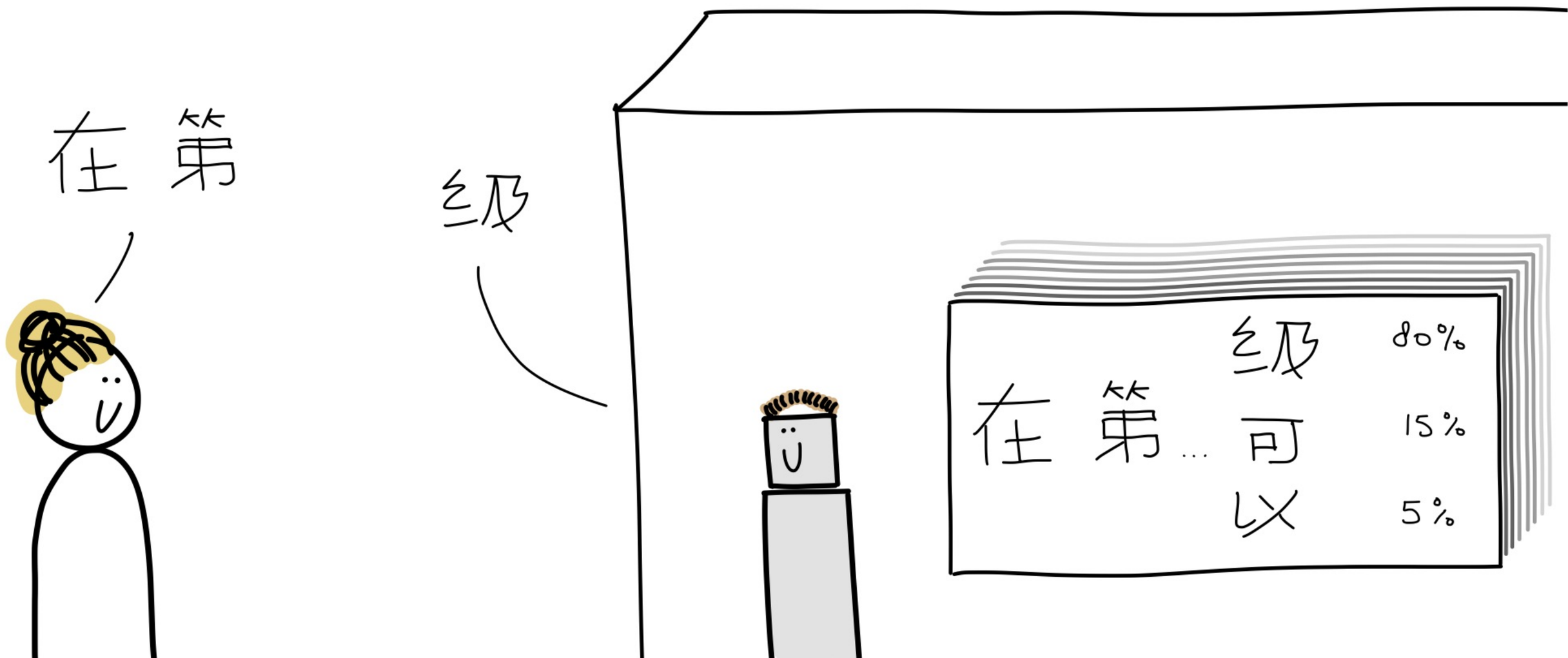

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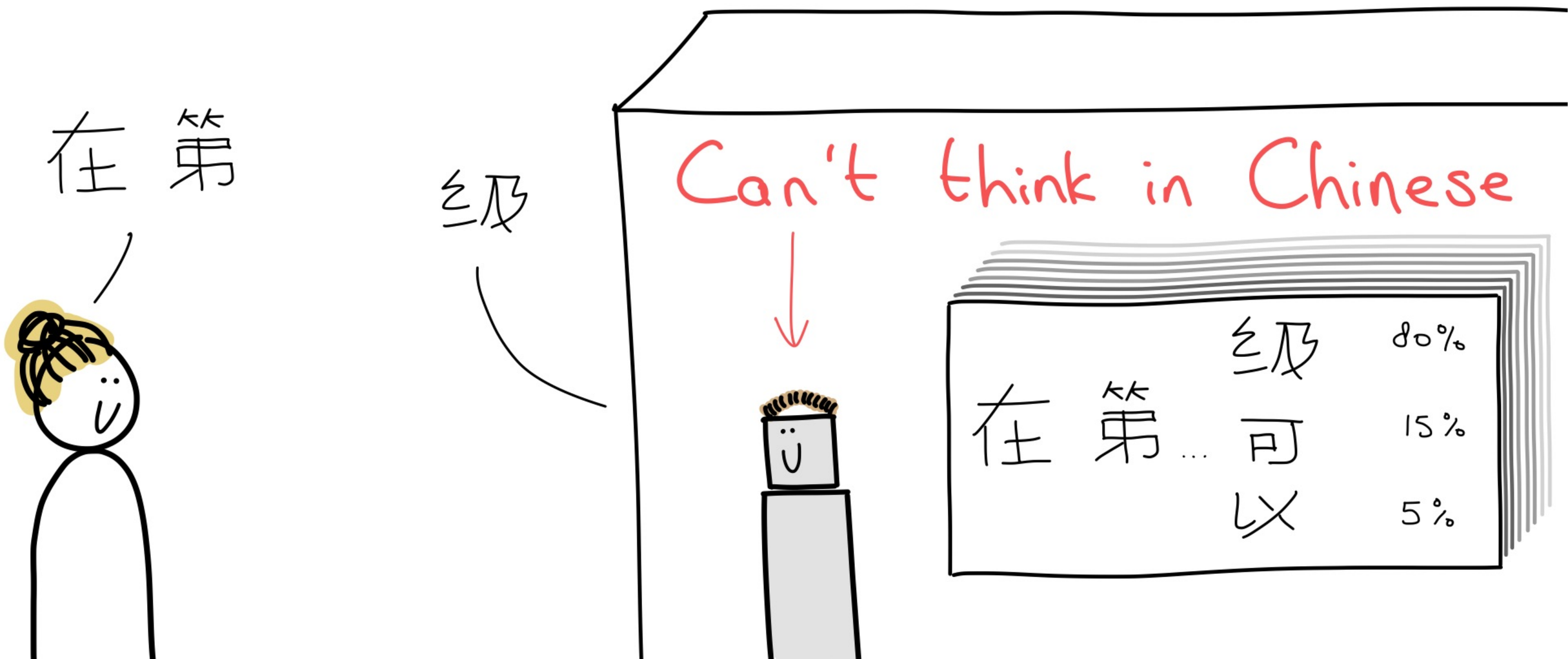
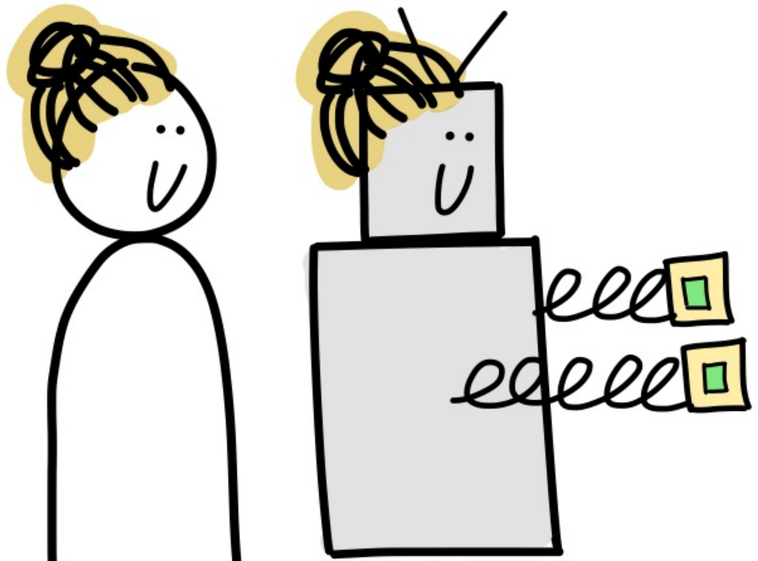


Marathon



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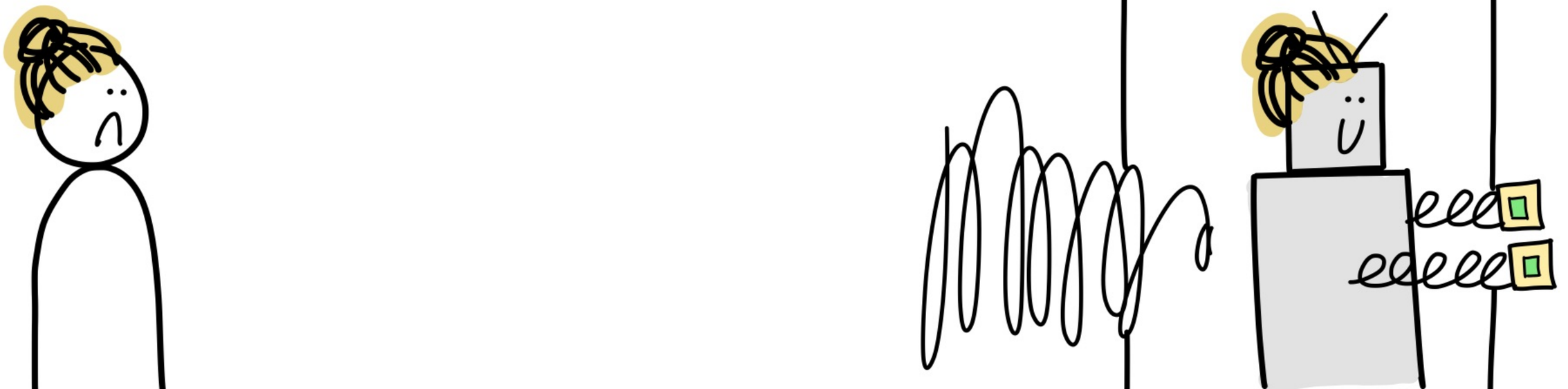

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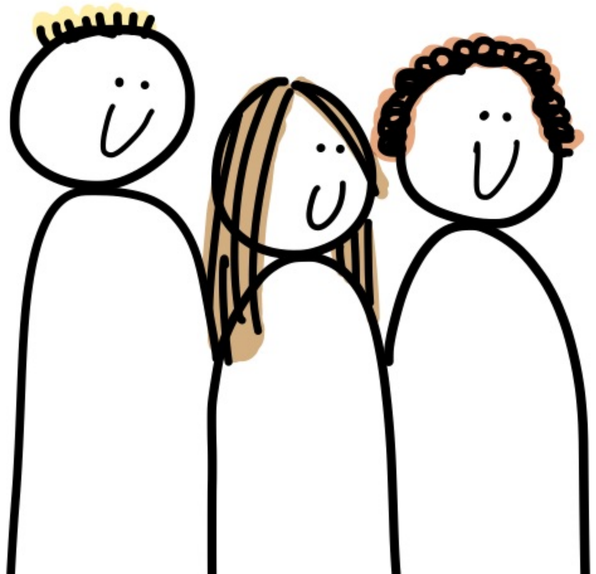
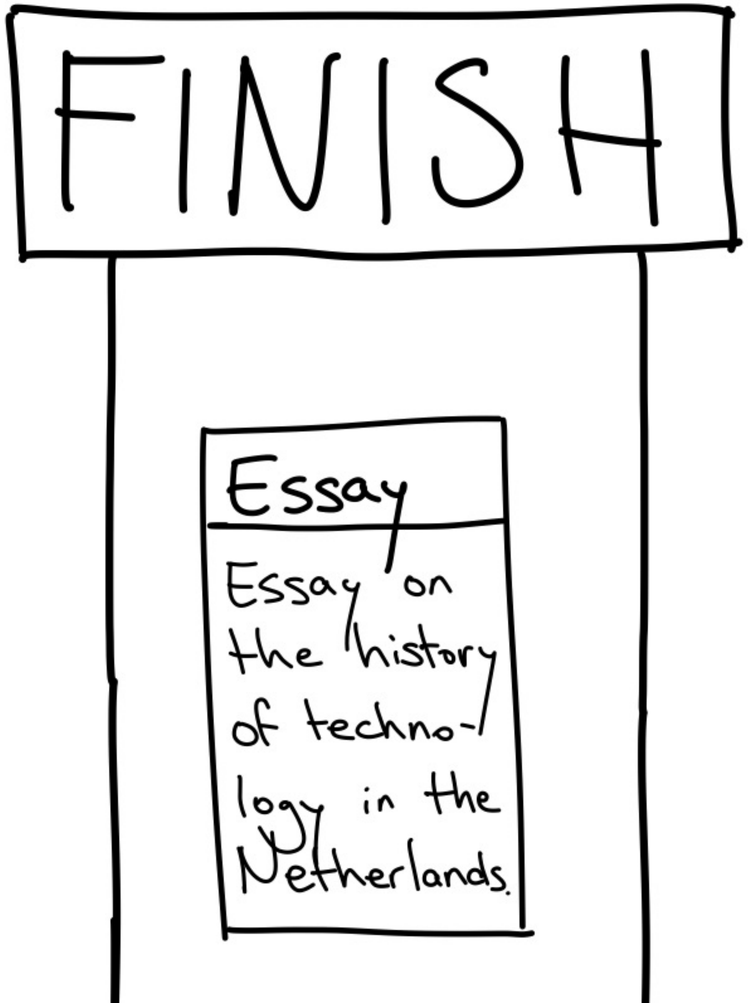
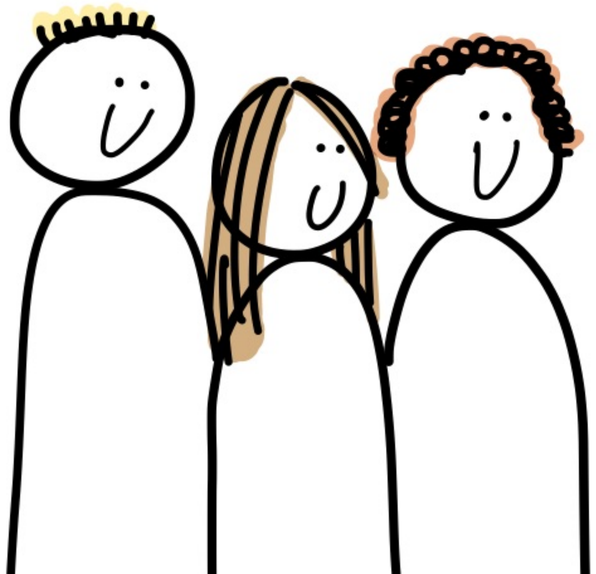



FINISH
Essay
Essay on the history of technology in the Netherlands.



This is not it

FINISH

Essay

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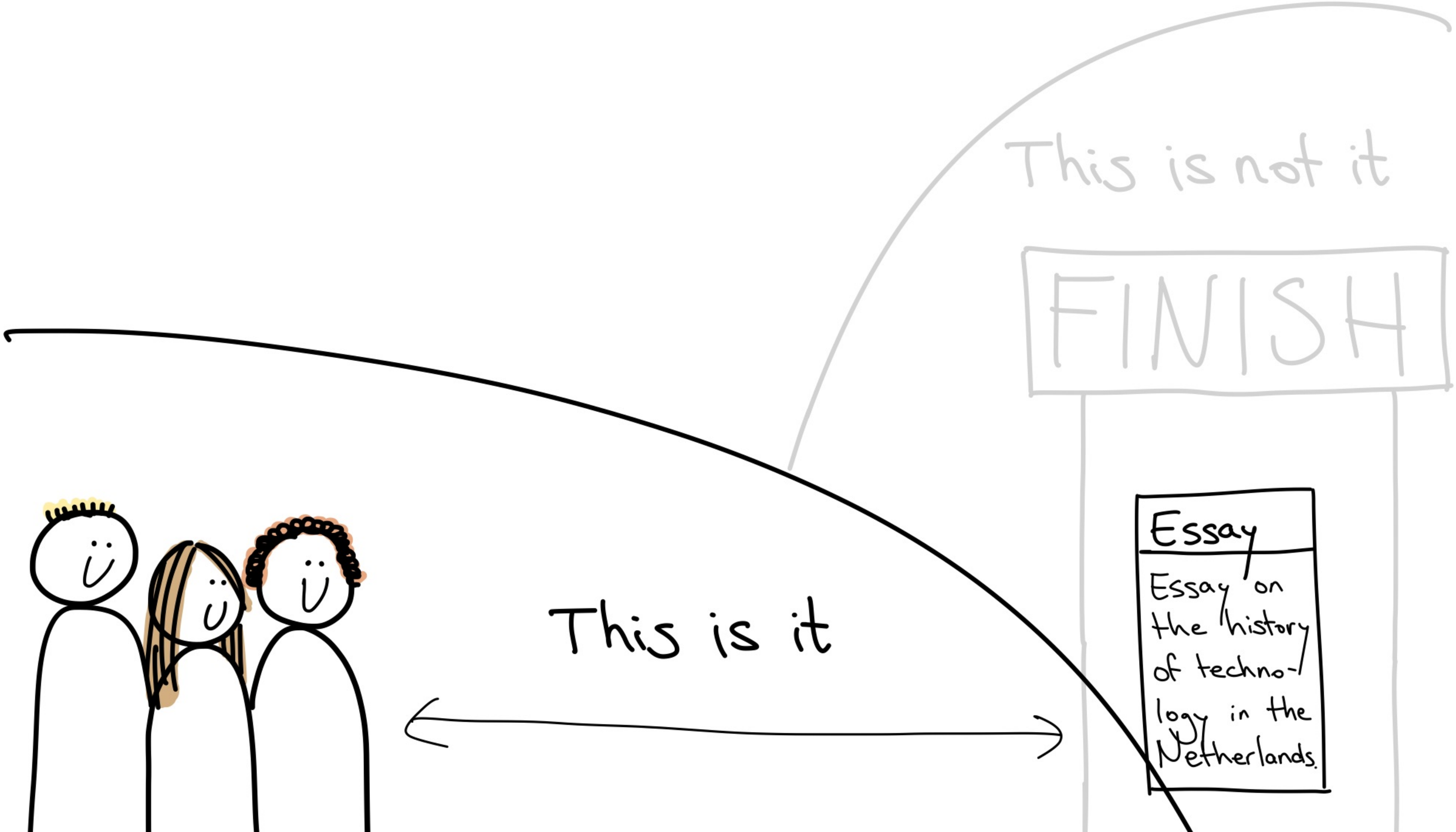
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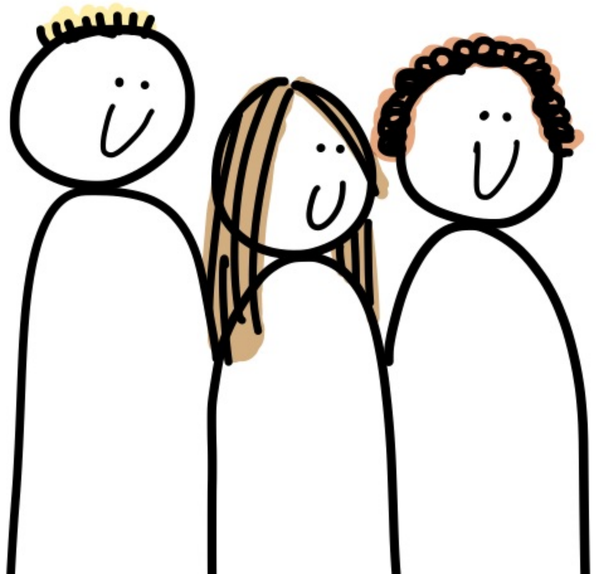

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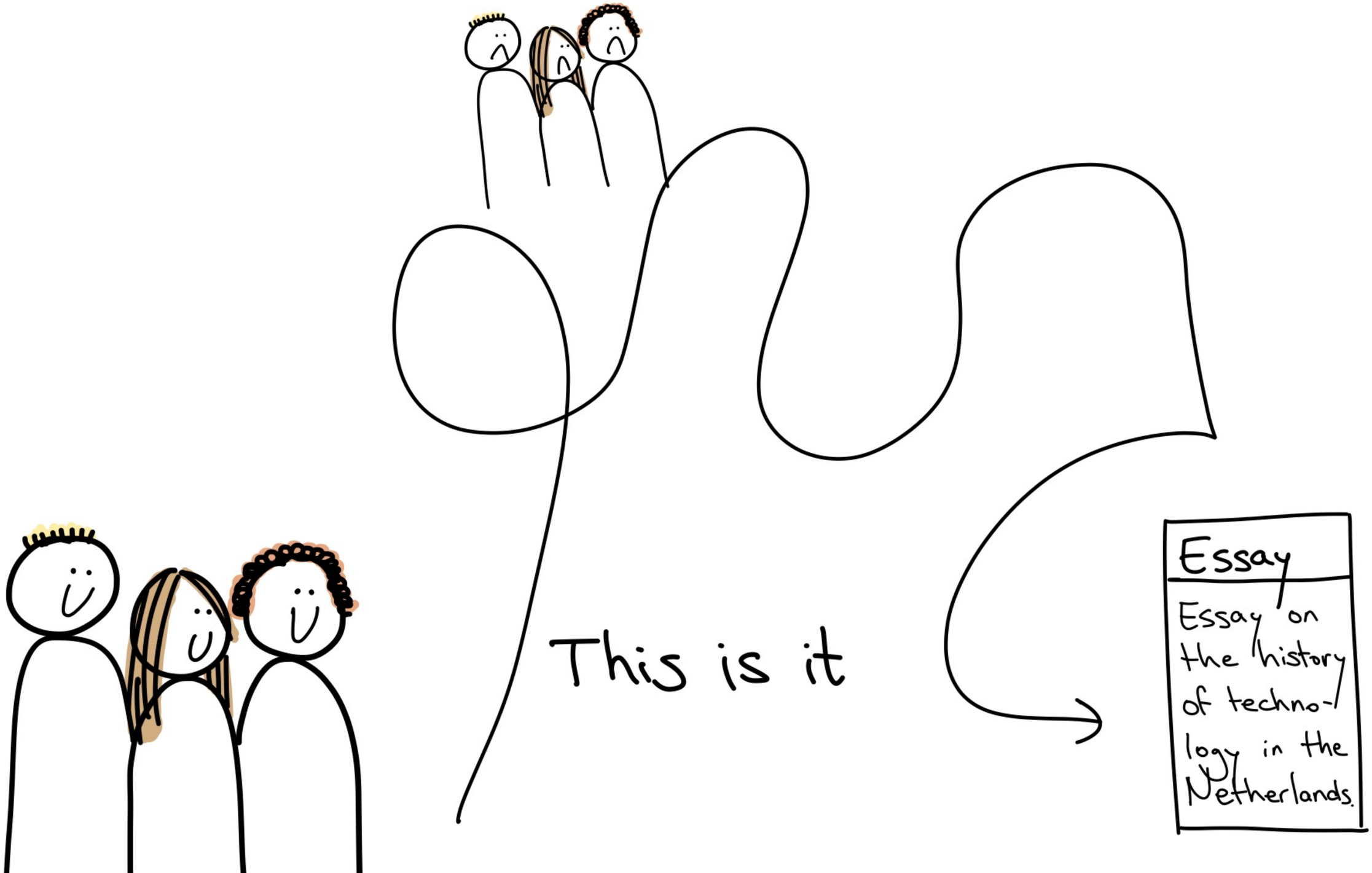
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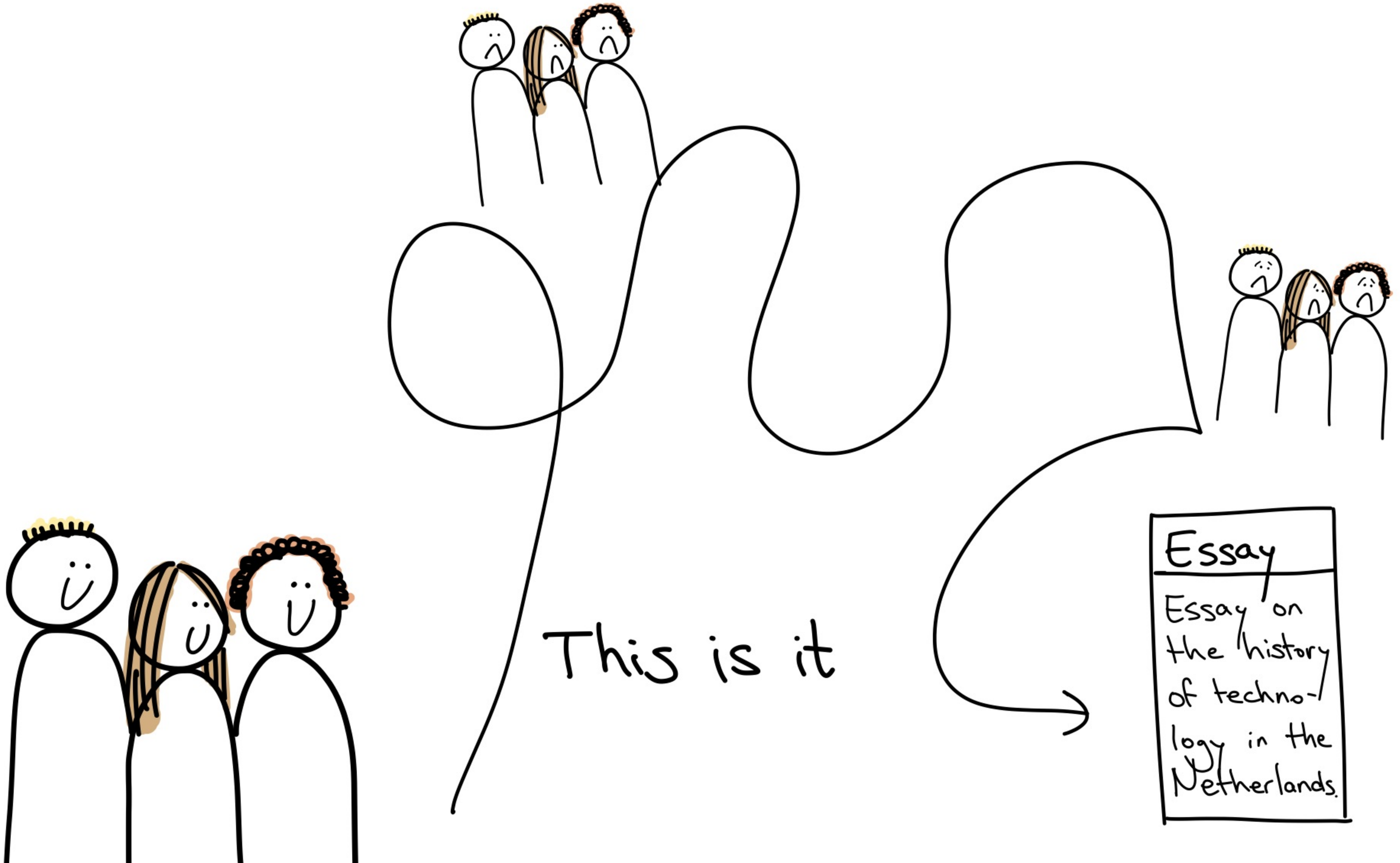
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Language Continuation Model

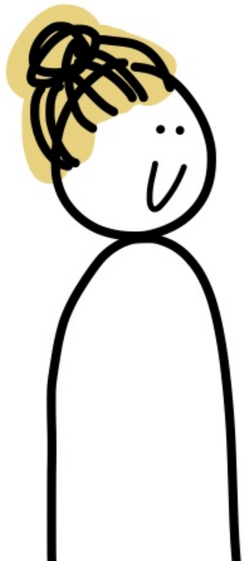
It can't ~~think~~

Language Continuation Model

It can't ~~think~~

But it can be dangerous

What is the Hedy programming language?



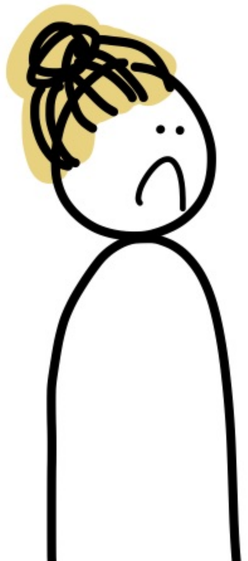
What is the Hedy programming language?

Hedy is a programming language created by Chris Pressey in 2021. It is an esoteric programming language, which means it was designed more as a form of artistic expression than for practical use.

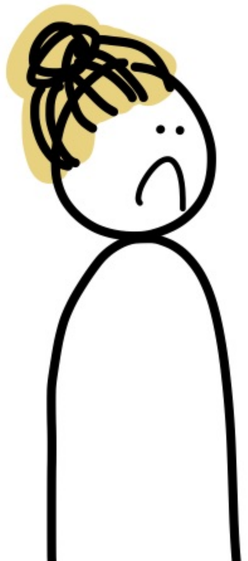
What makes Hedy unique is that it is designed to be written and read in a way that is reminiscent of natural language. This means that Hedy programs can read like poetry or prose, rather than a series of terse commands.

Hedy is also notable for its use of interactive fiction-style branching narratives. Hedy programs can have multiple paths of execution, which can lead to different outcomes depending on the user's input.

Overall, Hedy is a fascinating experiment in programming language design and a testament to the creativity and ingenuity of the programming community.



Are you sure Pressey created Hedy?



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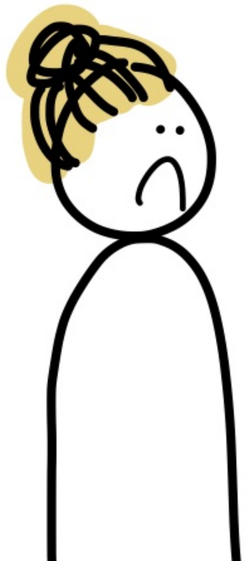

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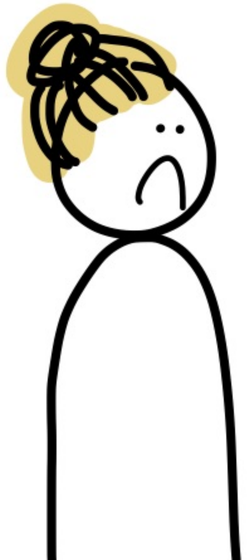

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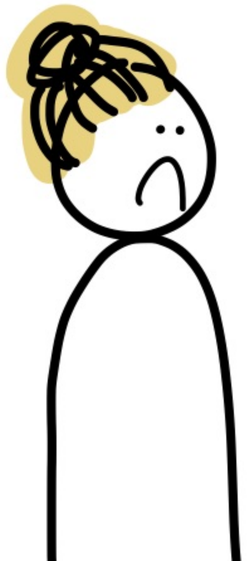

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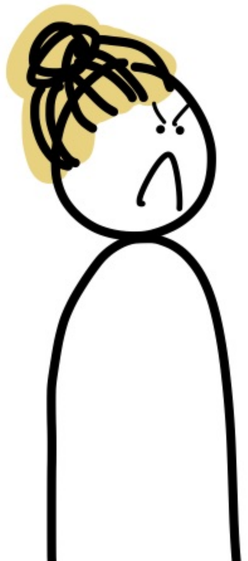
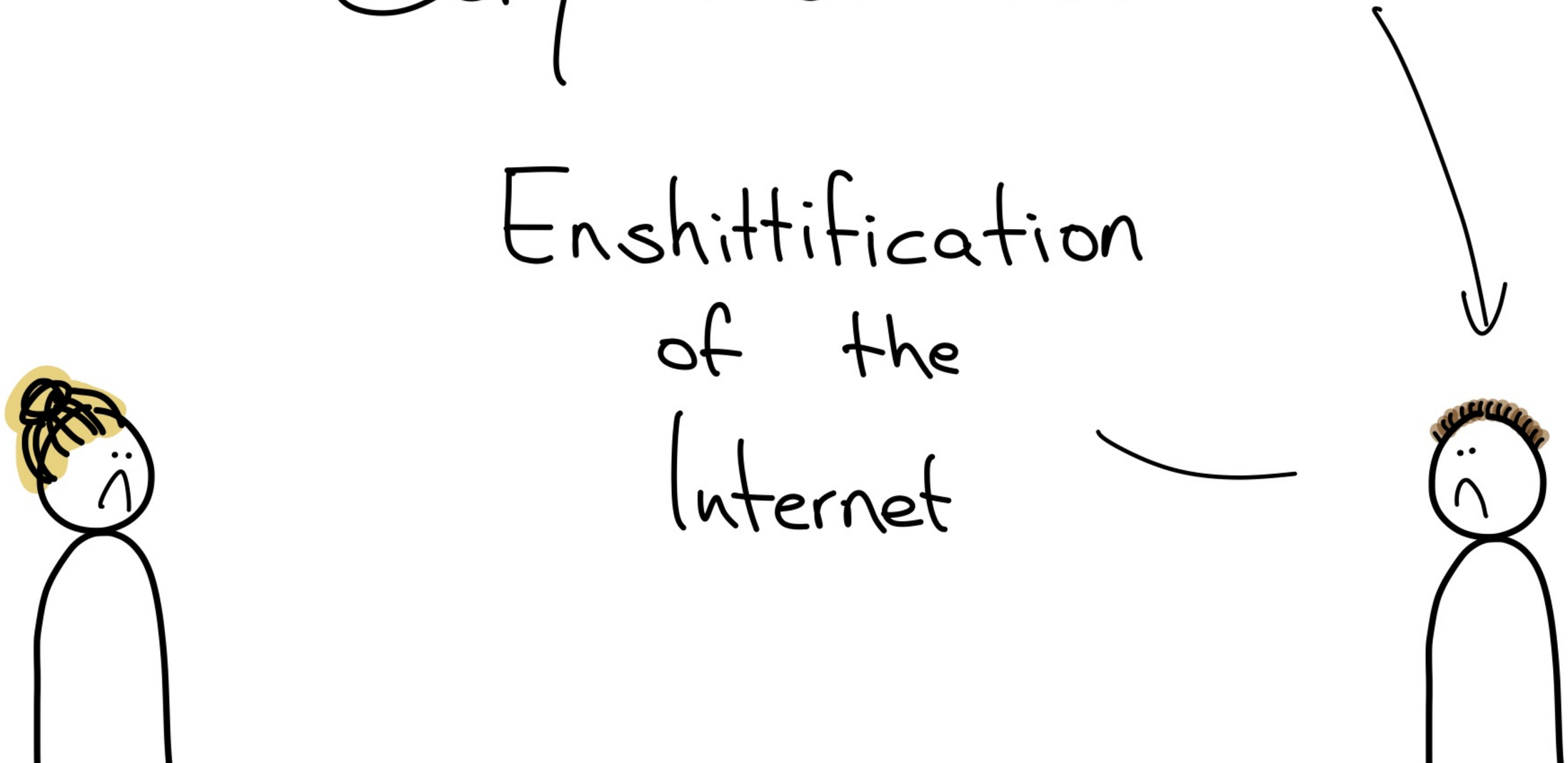


Cory Doctorow

Cory Doctorow

Enshittification of the Internet



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Hedy is not created by Chris Pressey. Instead, it was created by Andy Matuschak and Michael Nielsen. It is indeed a programming language that emphasizes human-friendly and natural language-like programming syntax.

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Wikipedia

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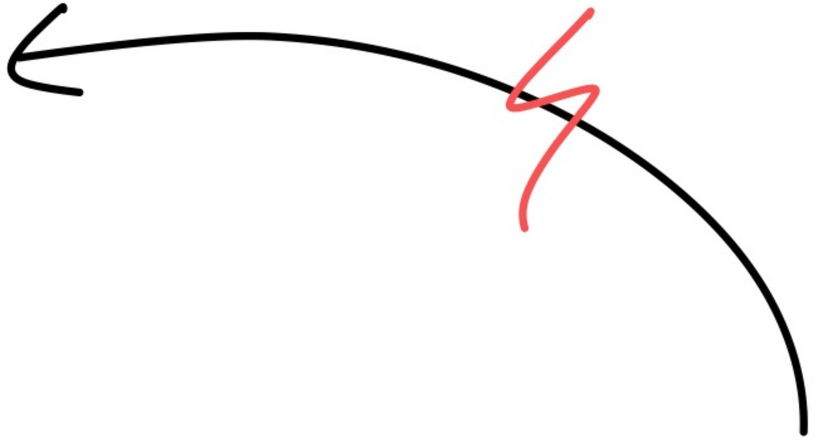

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Cultural Bias

Sharks do exist, however they rarely attack *humams*. *Mosb* sharks are scared of humans and would swim away.

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Reikia išversti šią frazę iš anglų kalbos į lietuvių kalbą, šaltinis: "Sharks do exist, however they rarely attack humans. Most sharks are scared of humans and would swim away." Tikslas:

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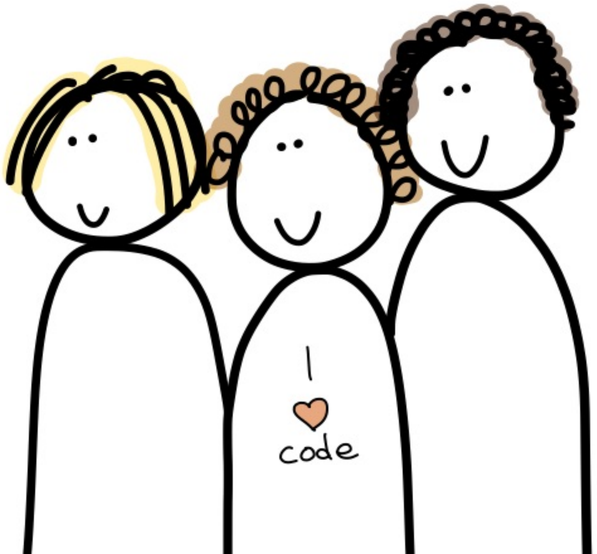
This is an English sentence, so there is no way to translate it into Vietnamese.

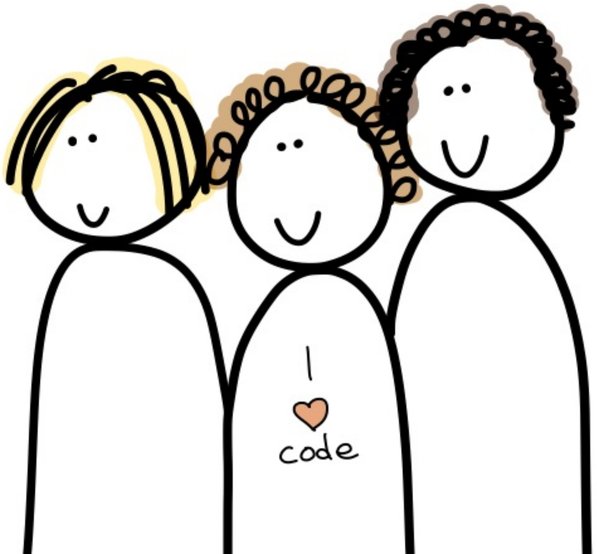
Guerreiro et al. 2023

Do we want students to learn from biased, inaccurate systems?



Do we want students to learn from biased, inaccurate systems?

(that also guzzle water and produce massive amounts of CO_2)



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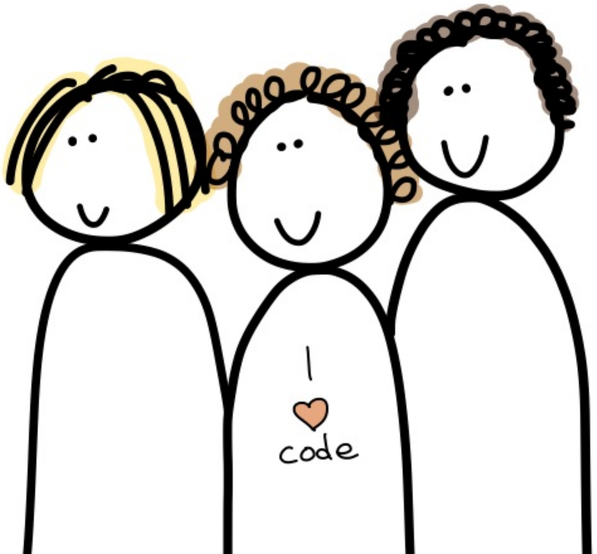
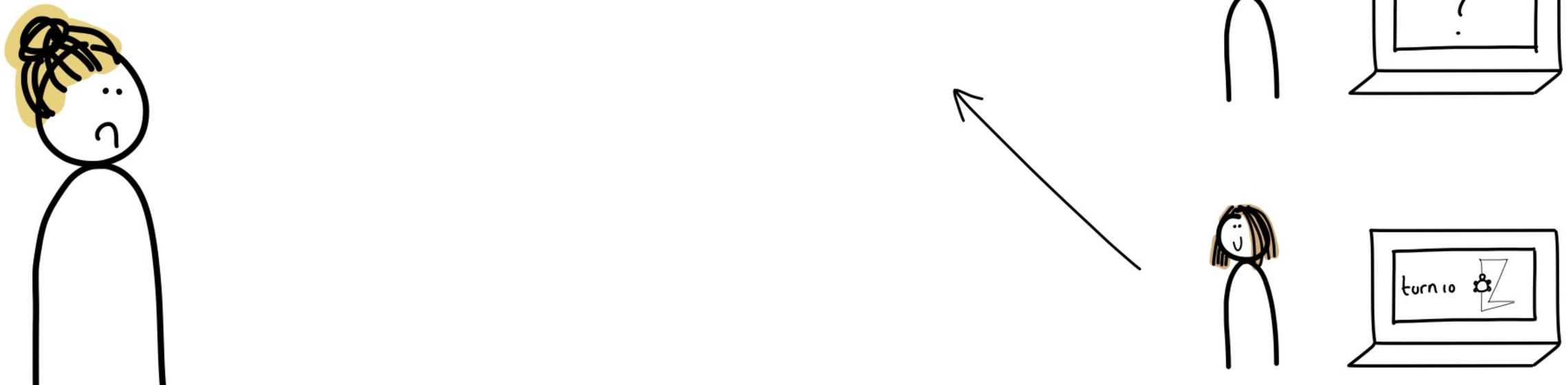


Do we want students to learn from biased, inaccurate systems?

Well... There are too many students!


print er was eens...
print een koning konijn
print hij at worteltjes
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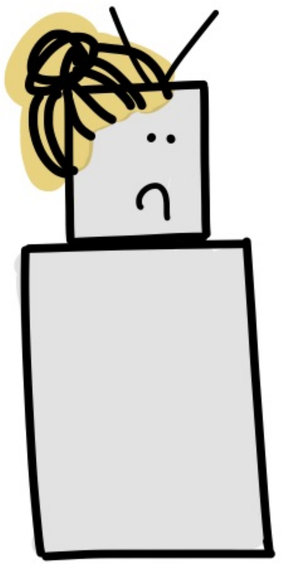
?
turn 10



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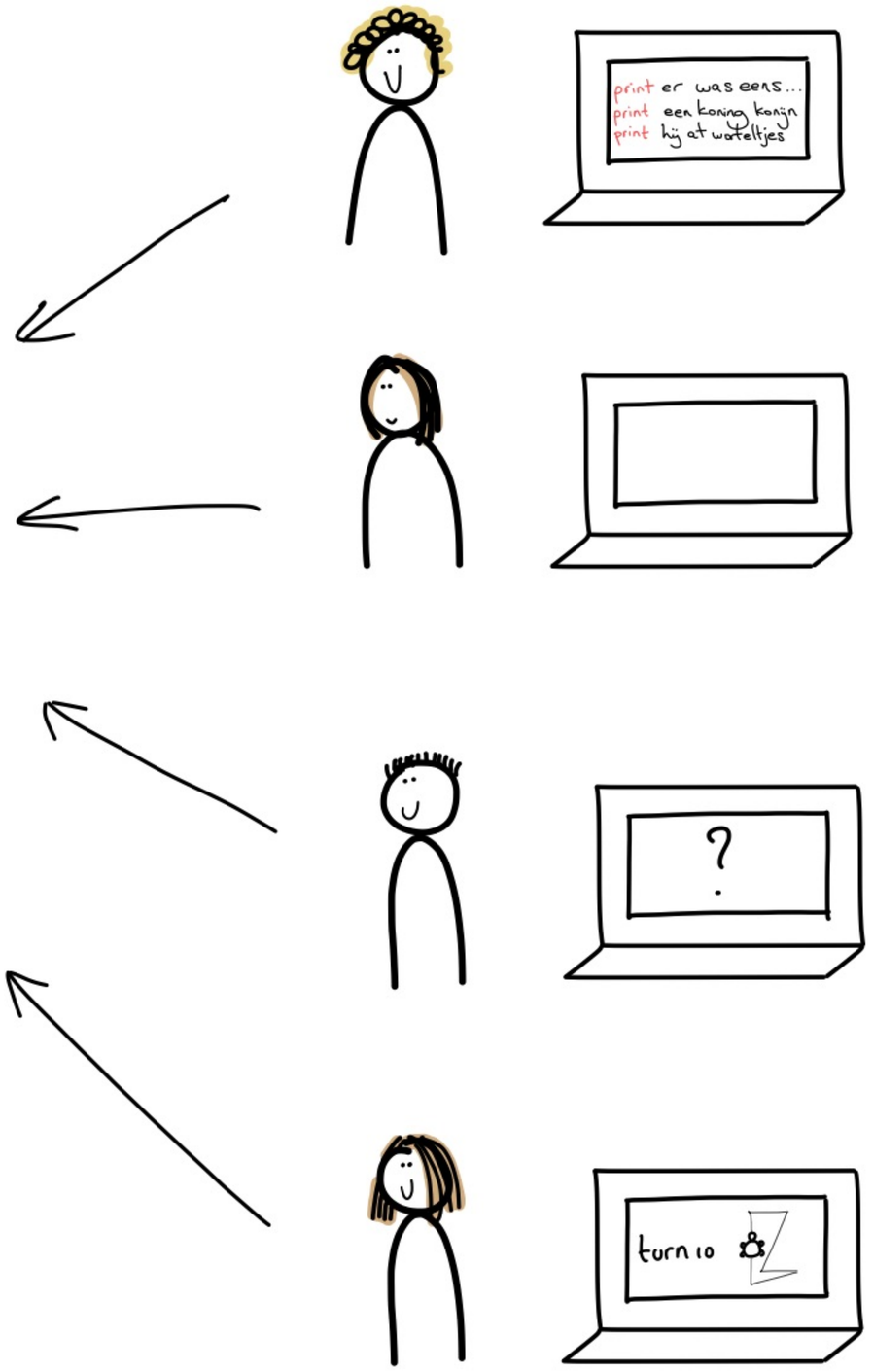
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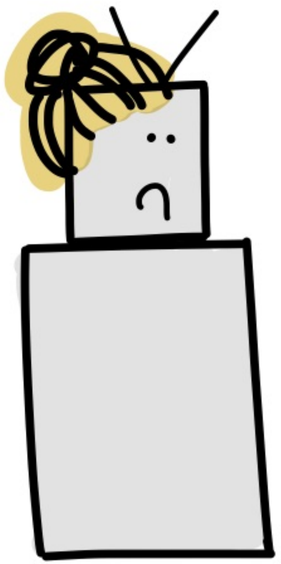

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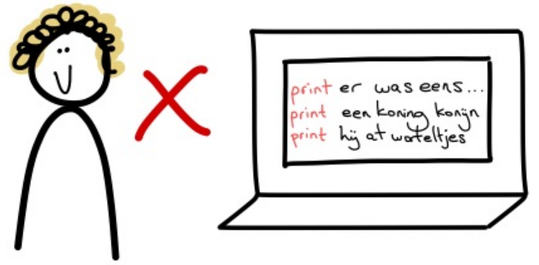
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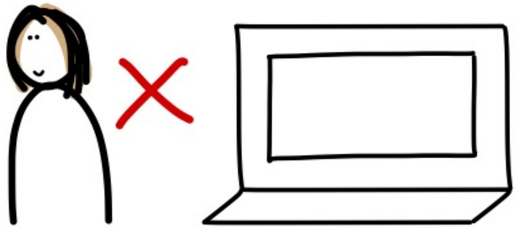

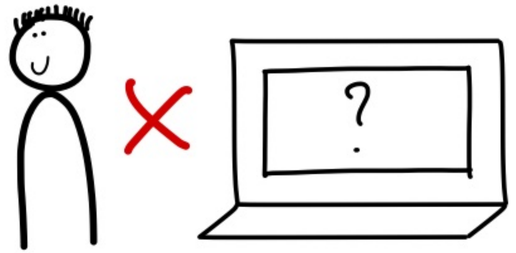
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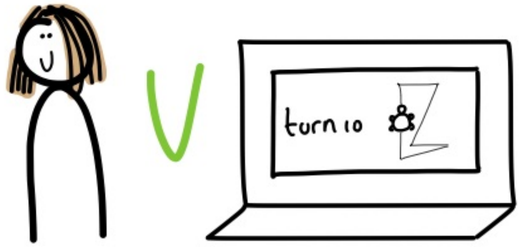
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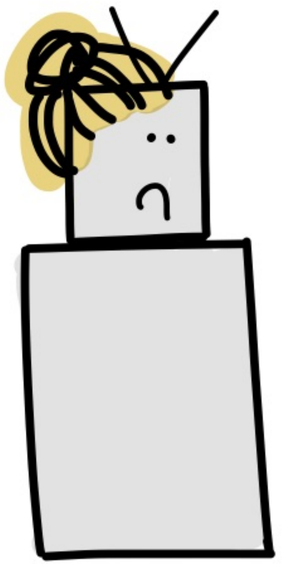

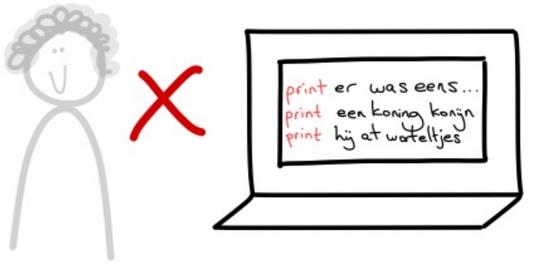
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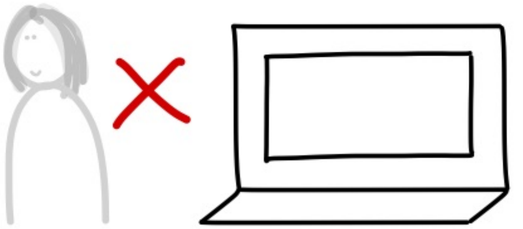

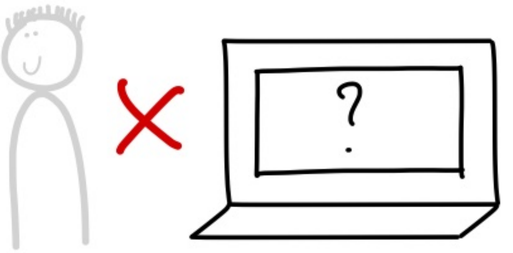
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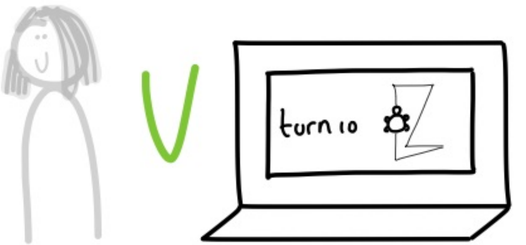
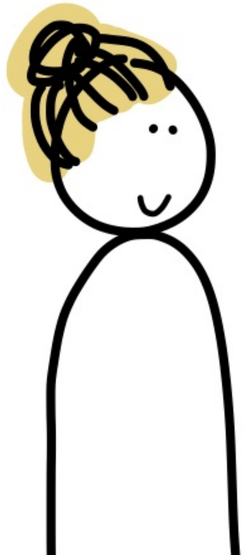

turn 10

How are you?



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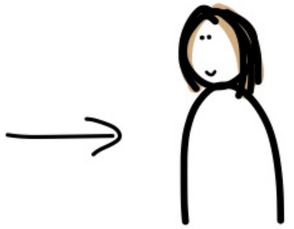

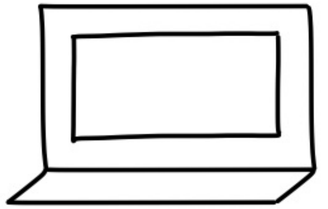

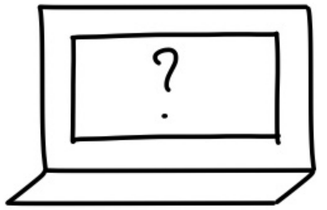
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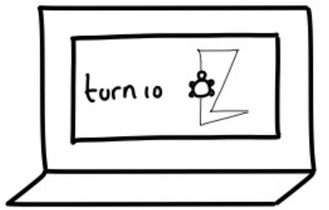
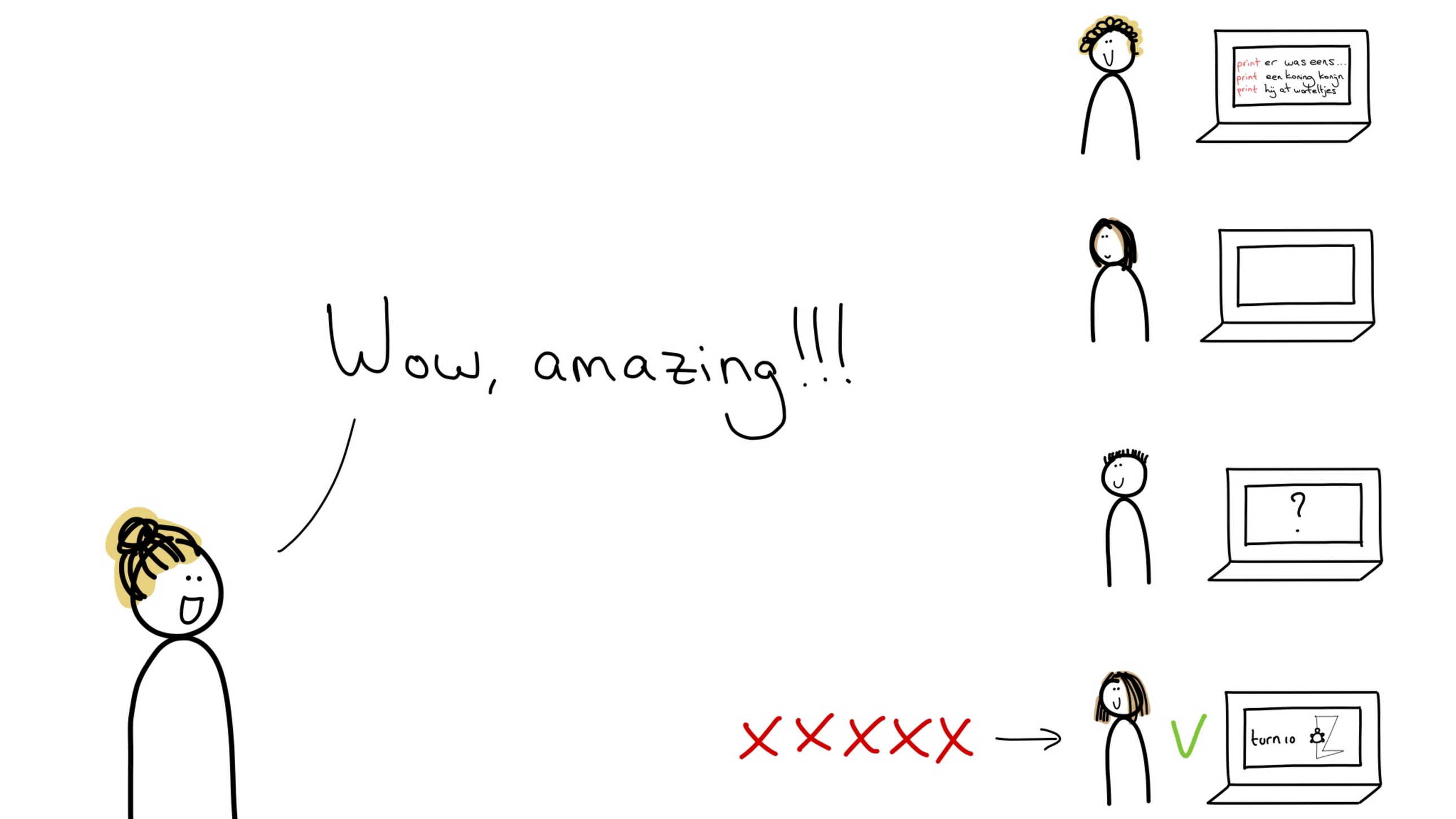
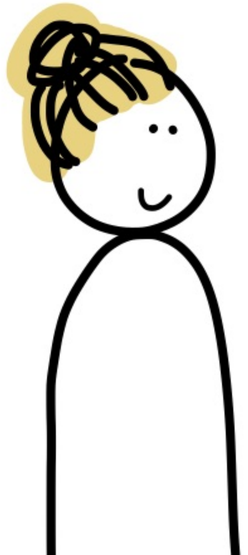
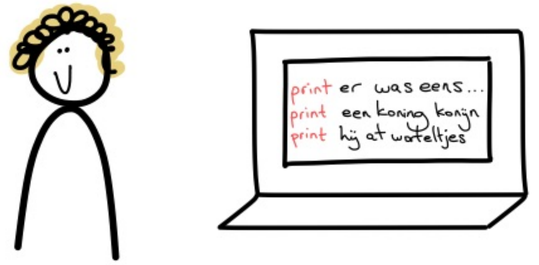

turn 10

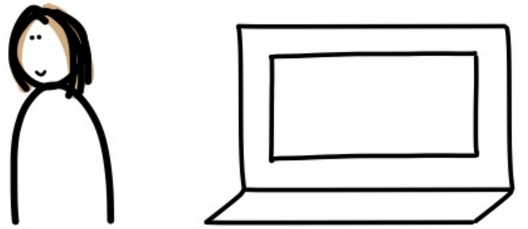

print er was eens...
print een koning konijn
print hij at worteltjes
Wow, amazing!!!
?
XXXXX
turn 10

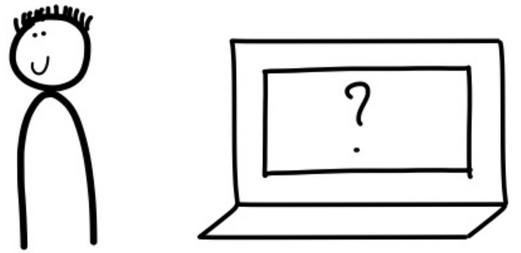
print er was eens...
print een koning konijn
print hij at wortelties
Maybe aim higher!
?
turn 10



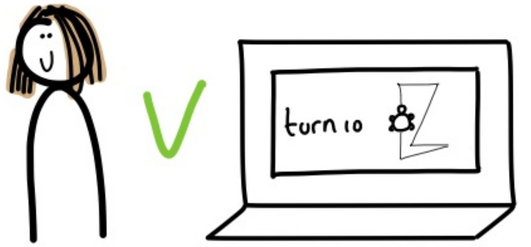
Do your German homework!





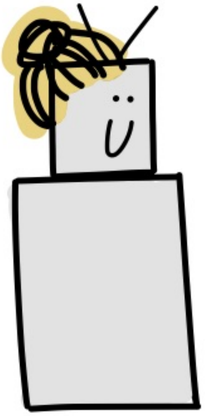


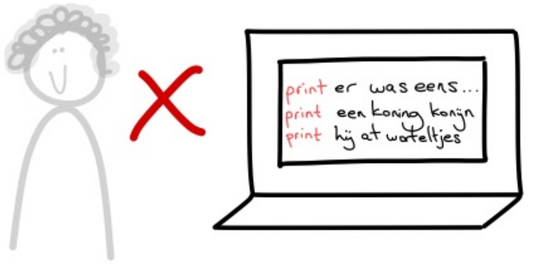
vvvvvv →

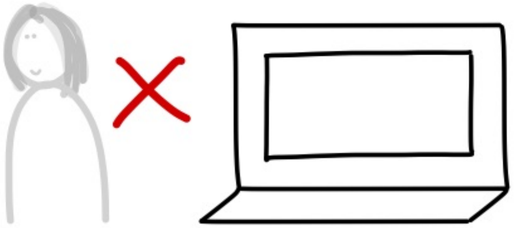


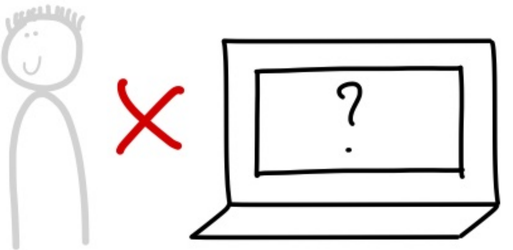
Looks at output

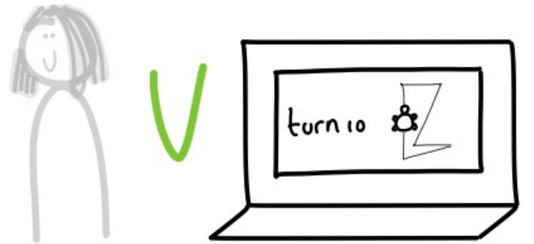
Limited vocabulary

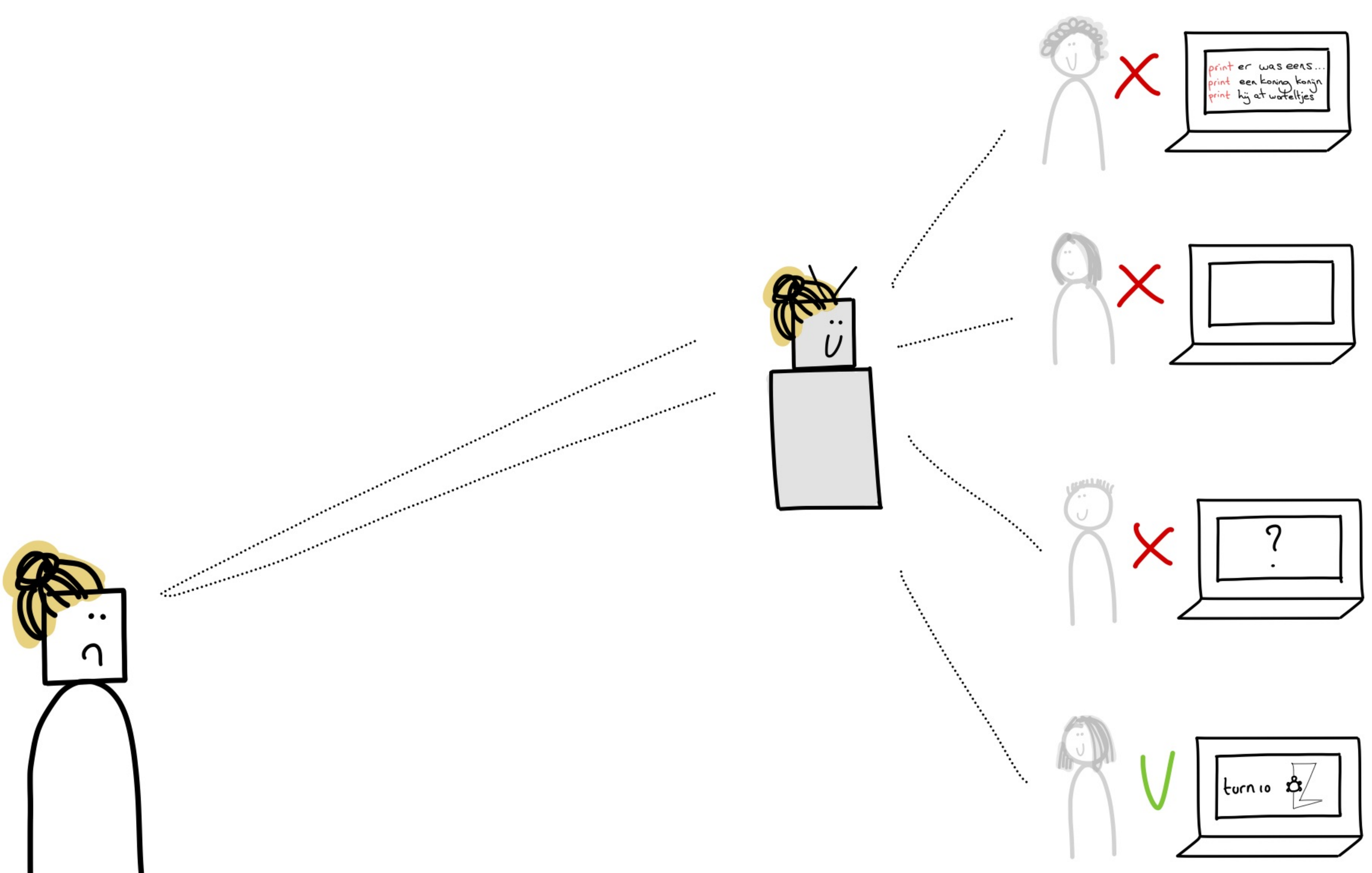


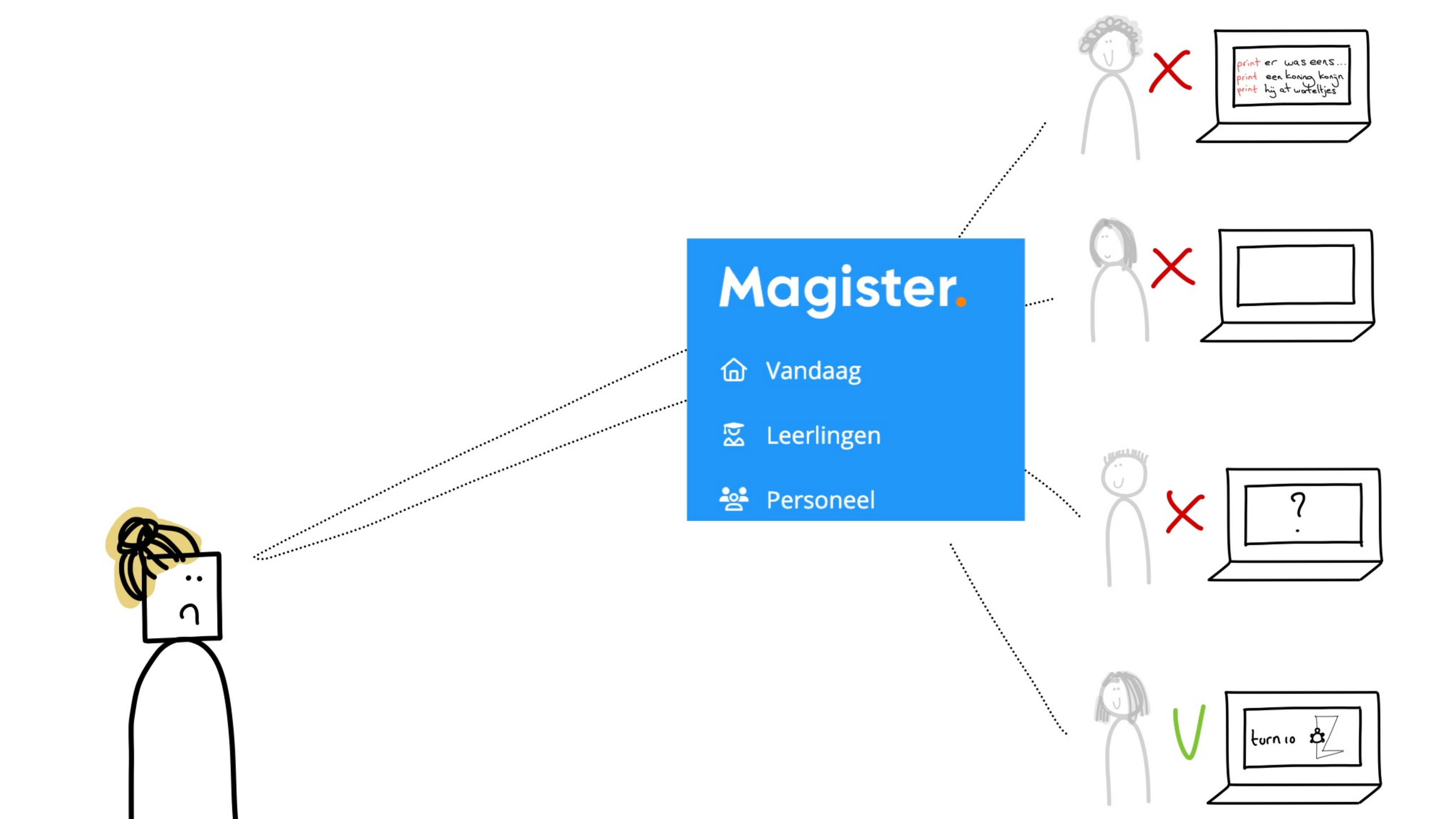


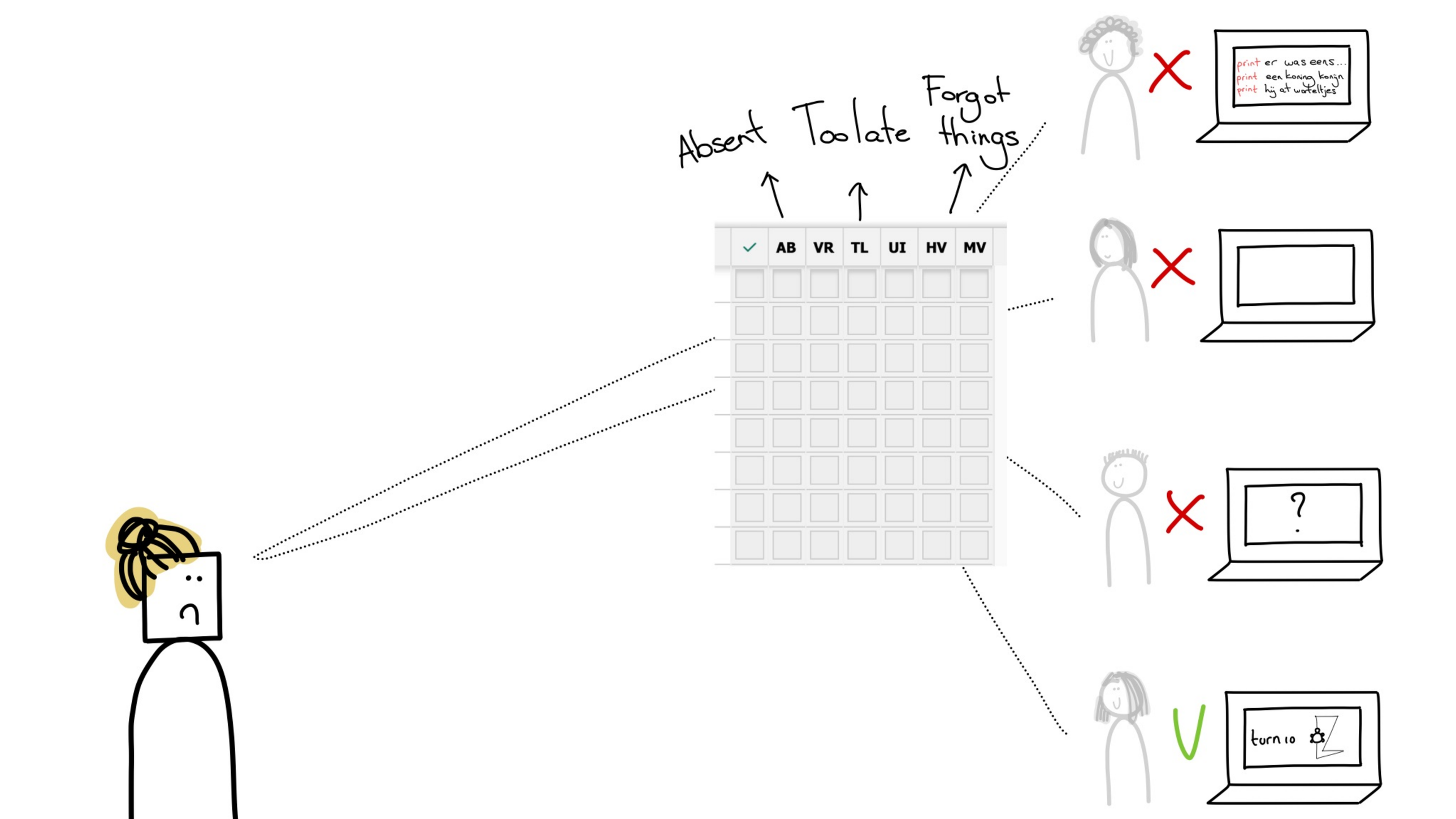


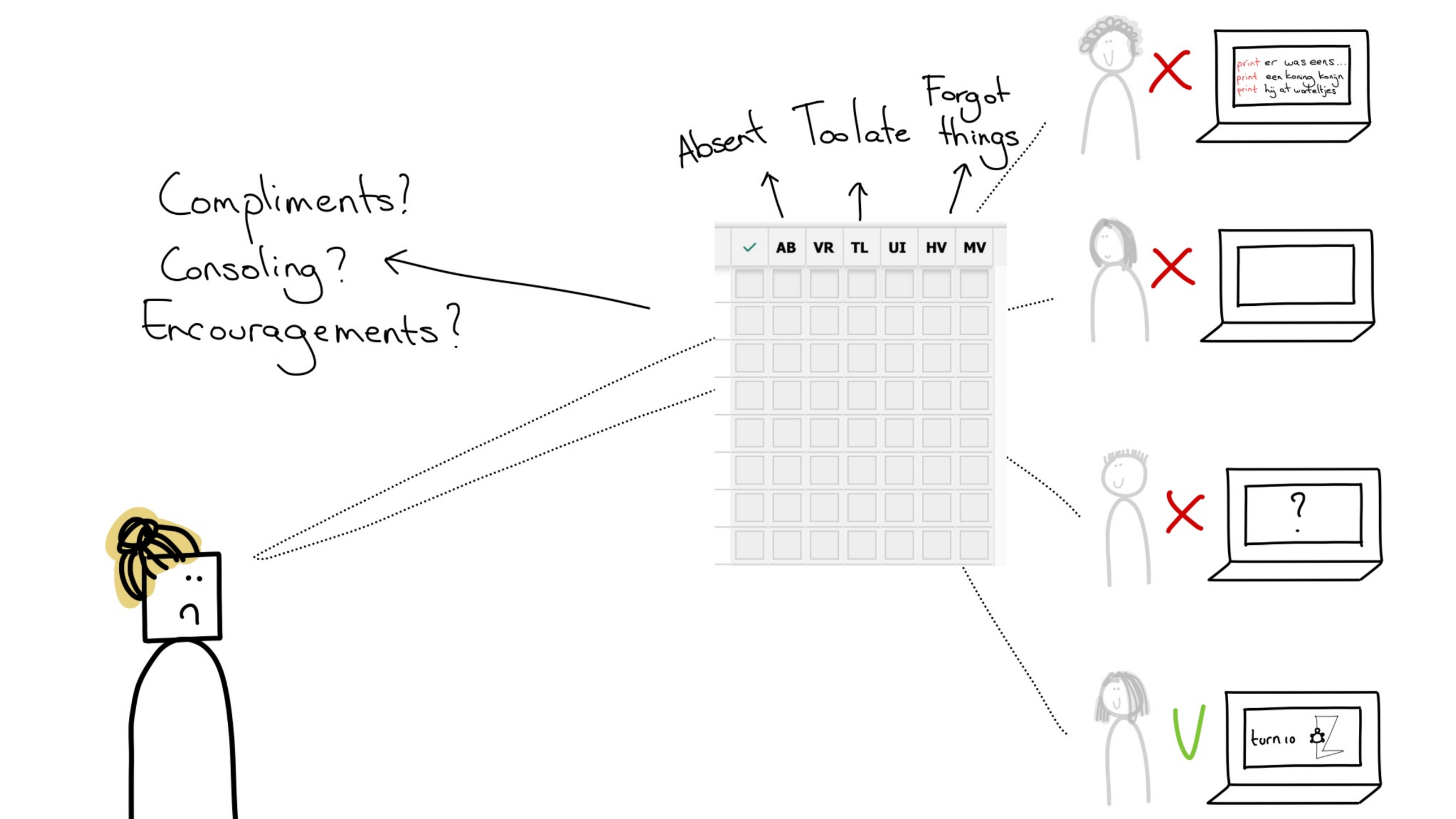


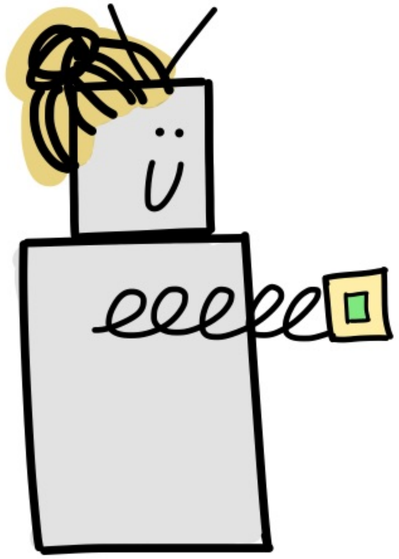


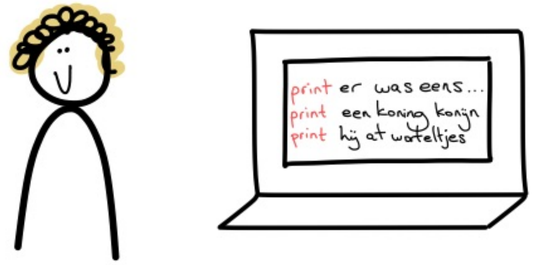

print er was eens...
print een koning konijn
print hij at watteltjes
?
turn to


Magister.
Vandaag
Leerlingen
Personeel
print er was eens...
print een koning konijn
print hij at wortelties
?
turn 10


Absent
Toolate
Forgot things
✓
AB
VR
TL
UI
HV
MV
print er was eens...
print een koning konijn
print hij at watteltjes
?
turn 10


Compliments?
Consoling?
Encouragements?
Absent
Too late
Forgot things
✓
AB
VR
TL
UI
HV
MV
print er was eens...
print een koning konijn
print hij at watteltjes
?
turn 10

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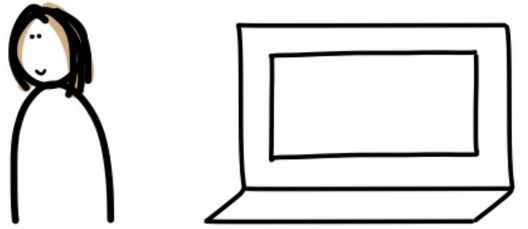

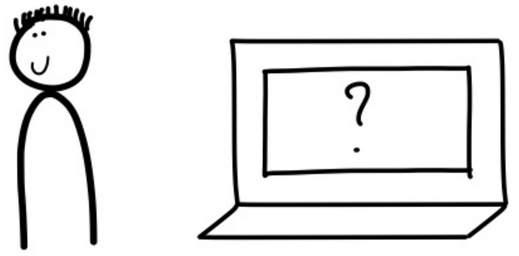
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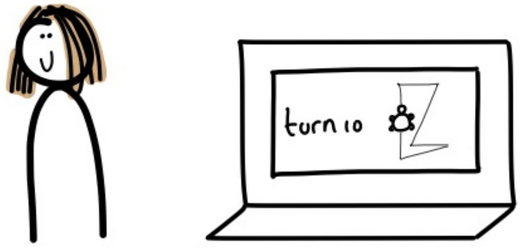
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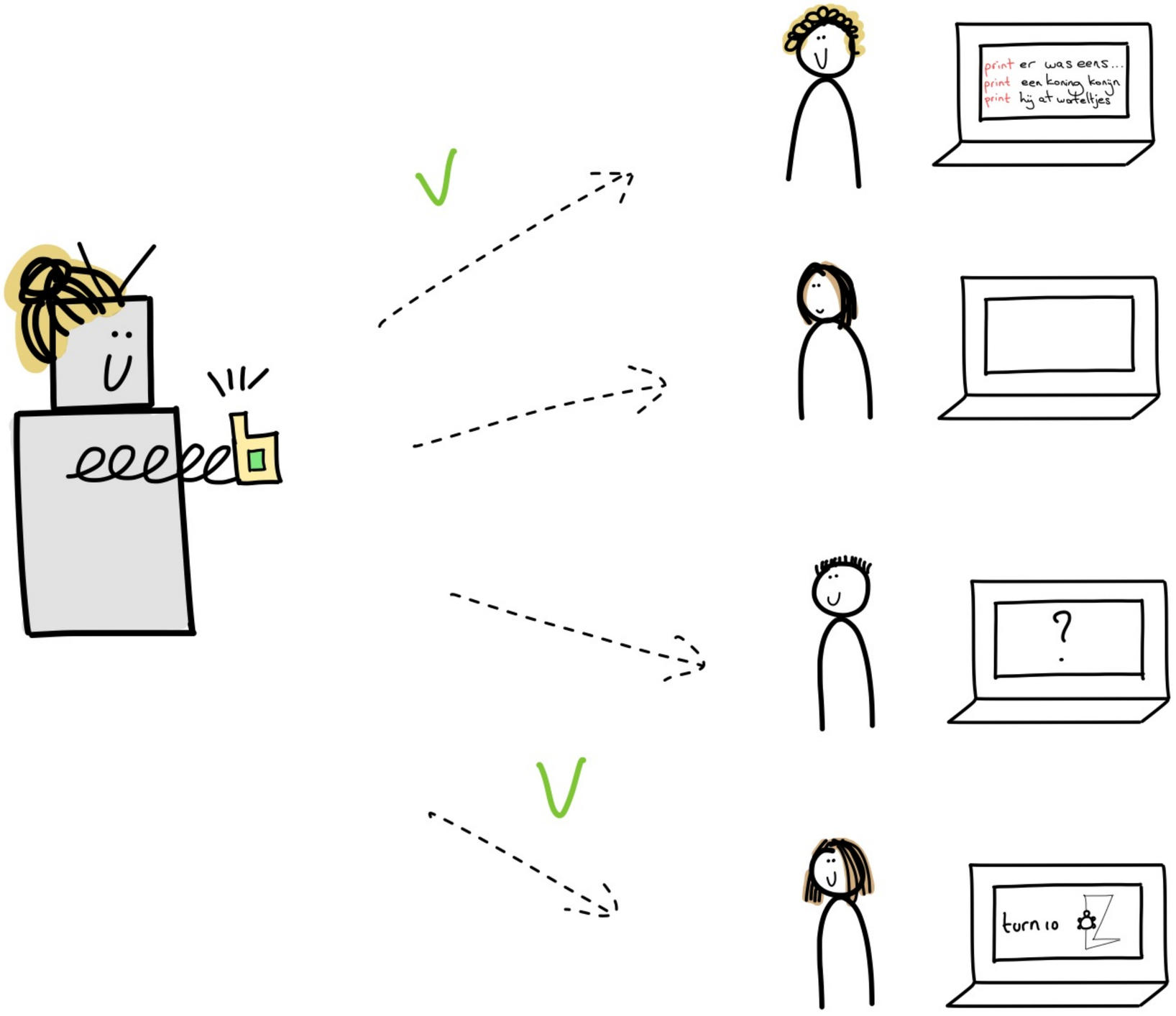
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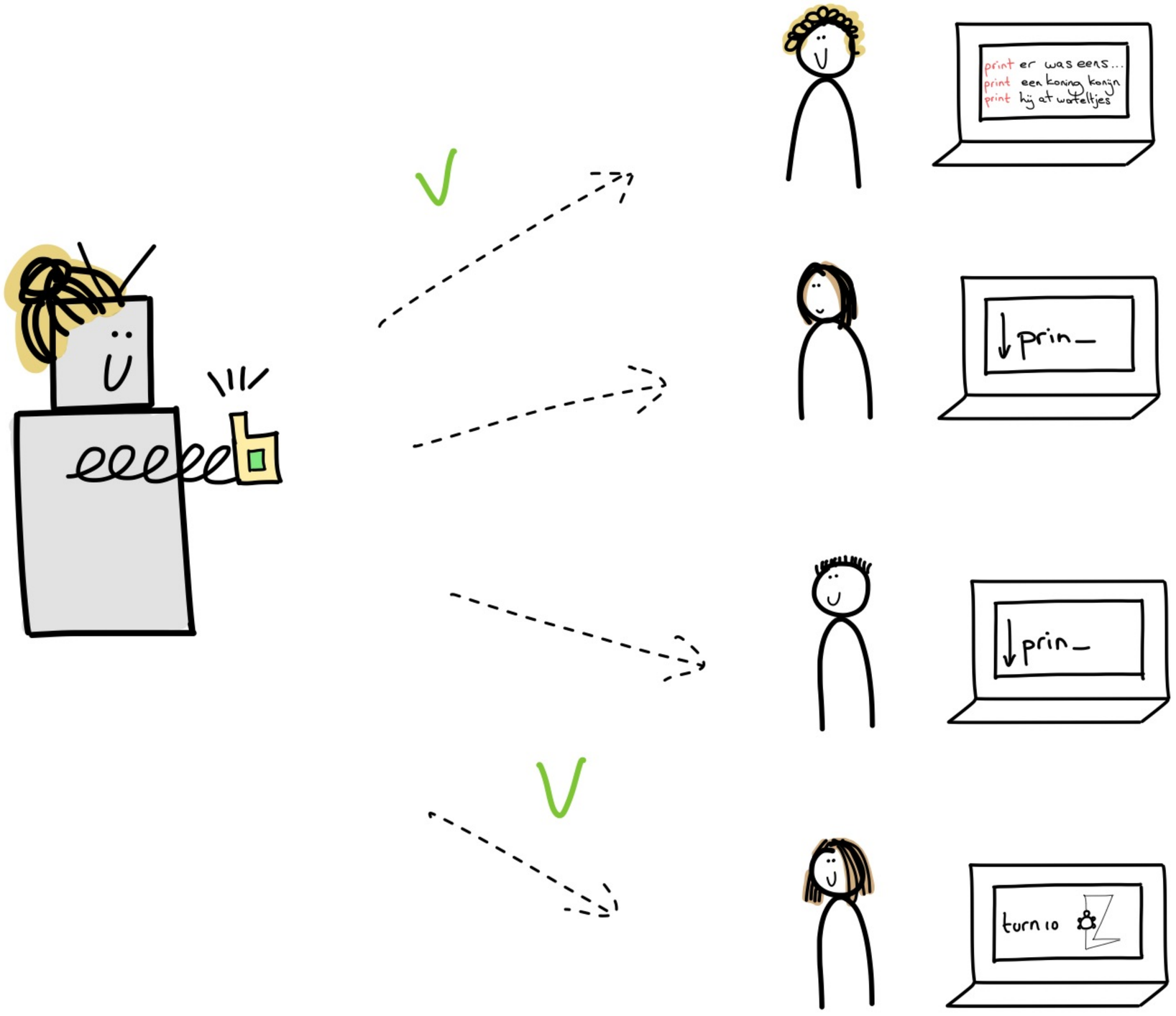
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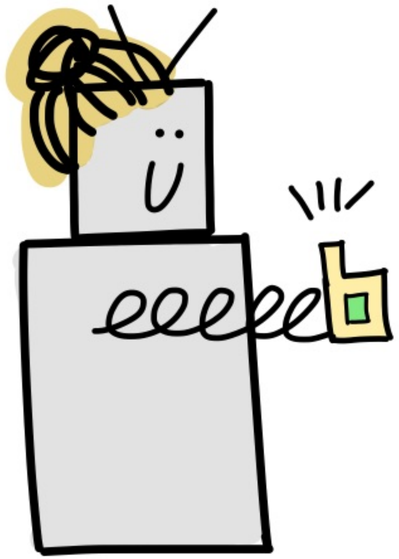

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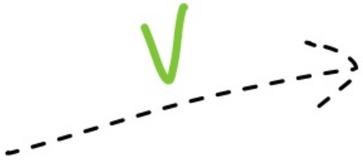

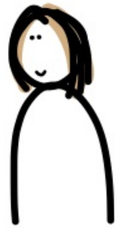

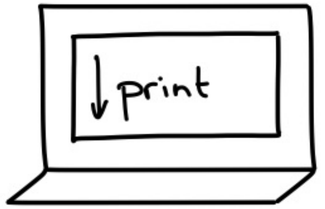
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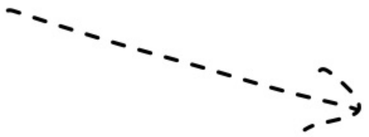

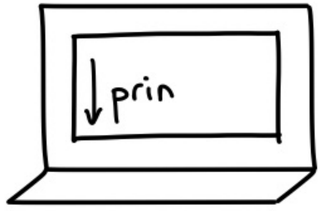
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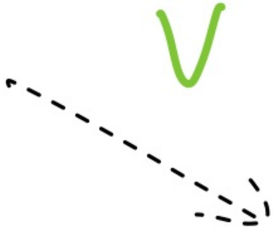

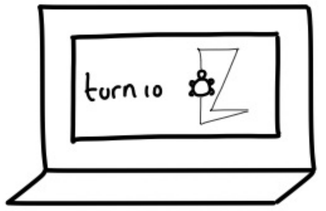
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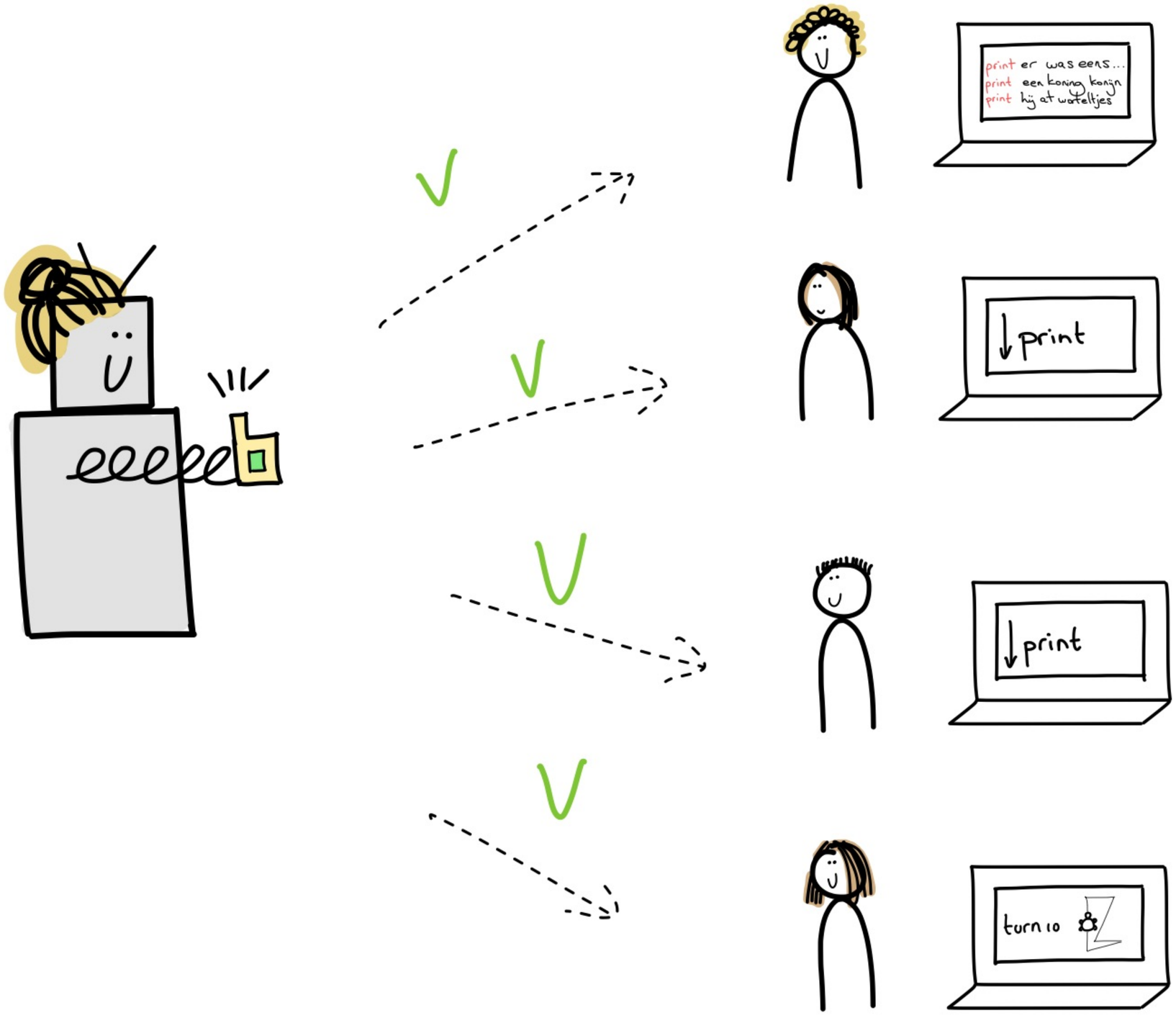
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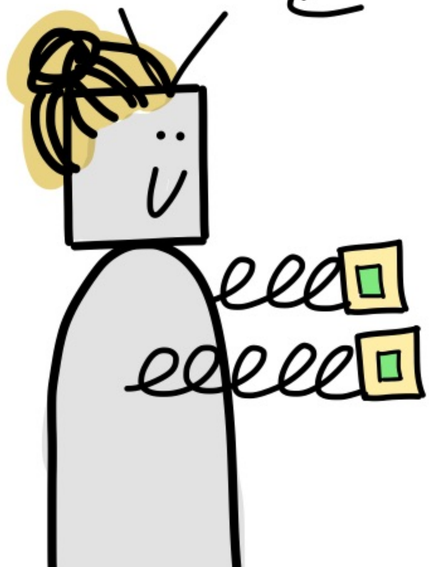
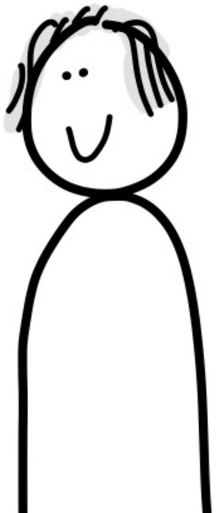
"The simple fact is...

"Teachers are out of date"

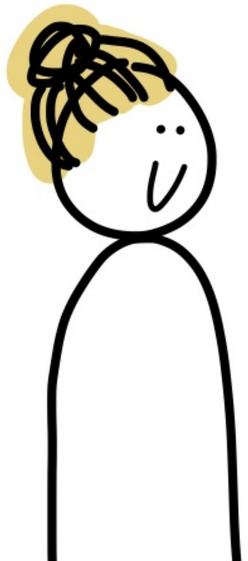


B.F. Skinner
1954



Felienne Hermans

felienne.com/news



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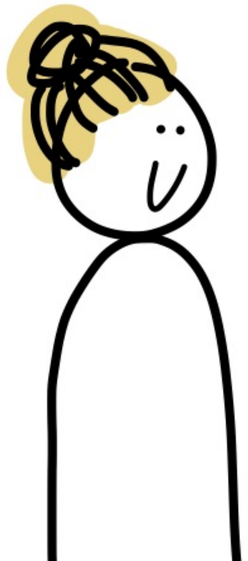

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