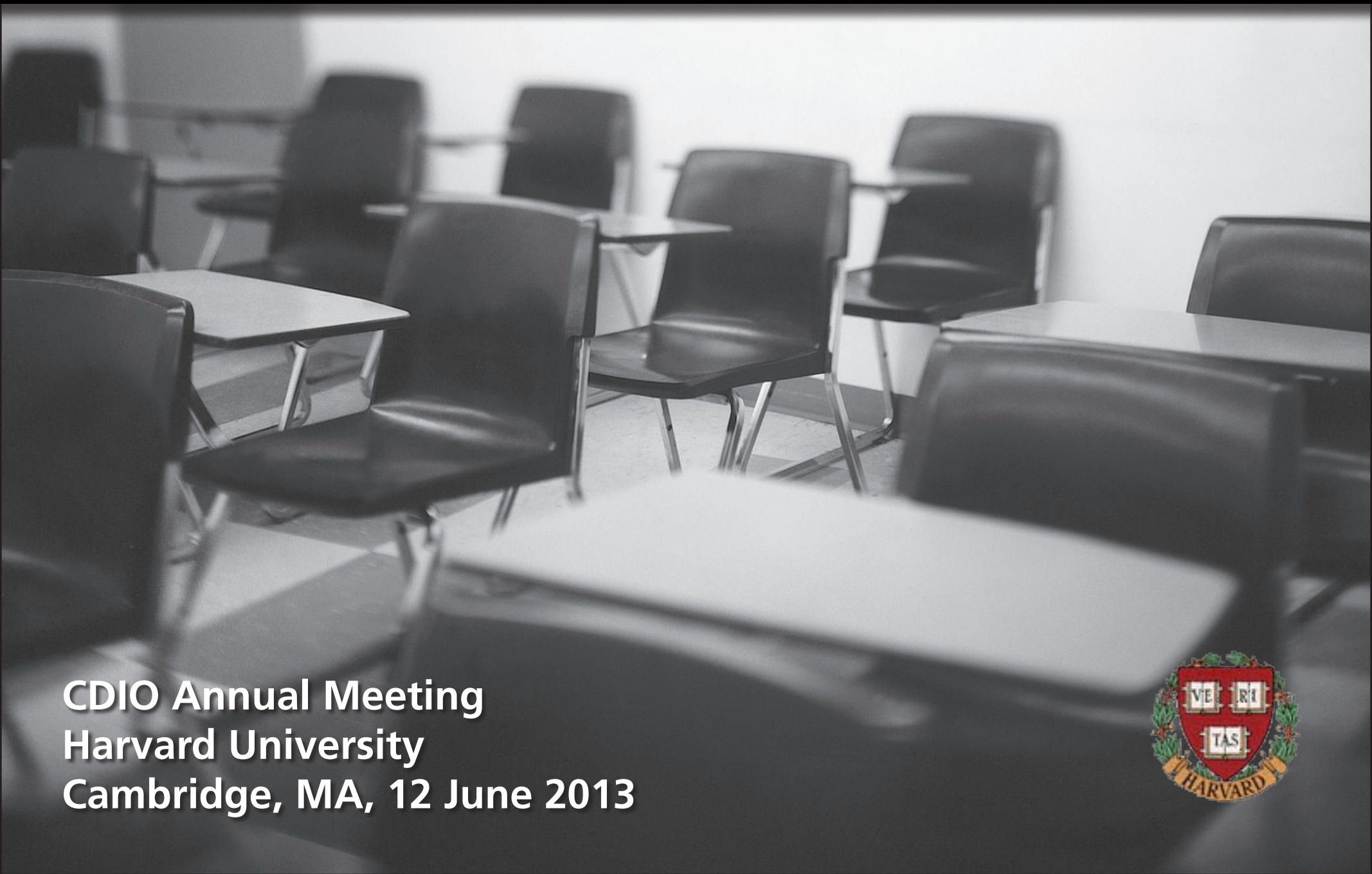
# Why you can pass tests and *still* fail in the real world



CDIO Annual Meeting
Harvard University
Cambridge, MA, 12 June 2013

# Why you can pass tests and *still* fail in the real world


CDIO Annual Meeting
Harvard University
Cambridge, MA, 12 June 2013

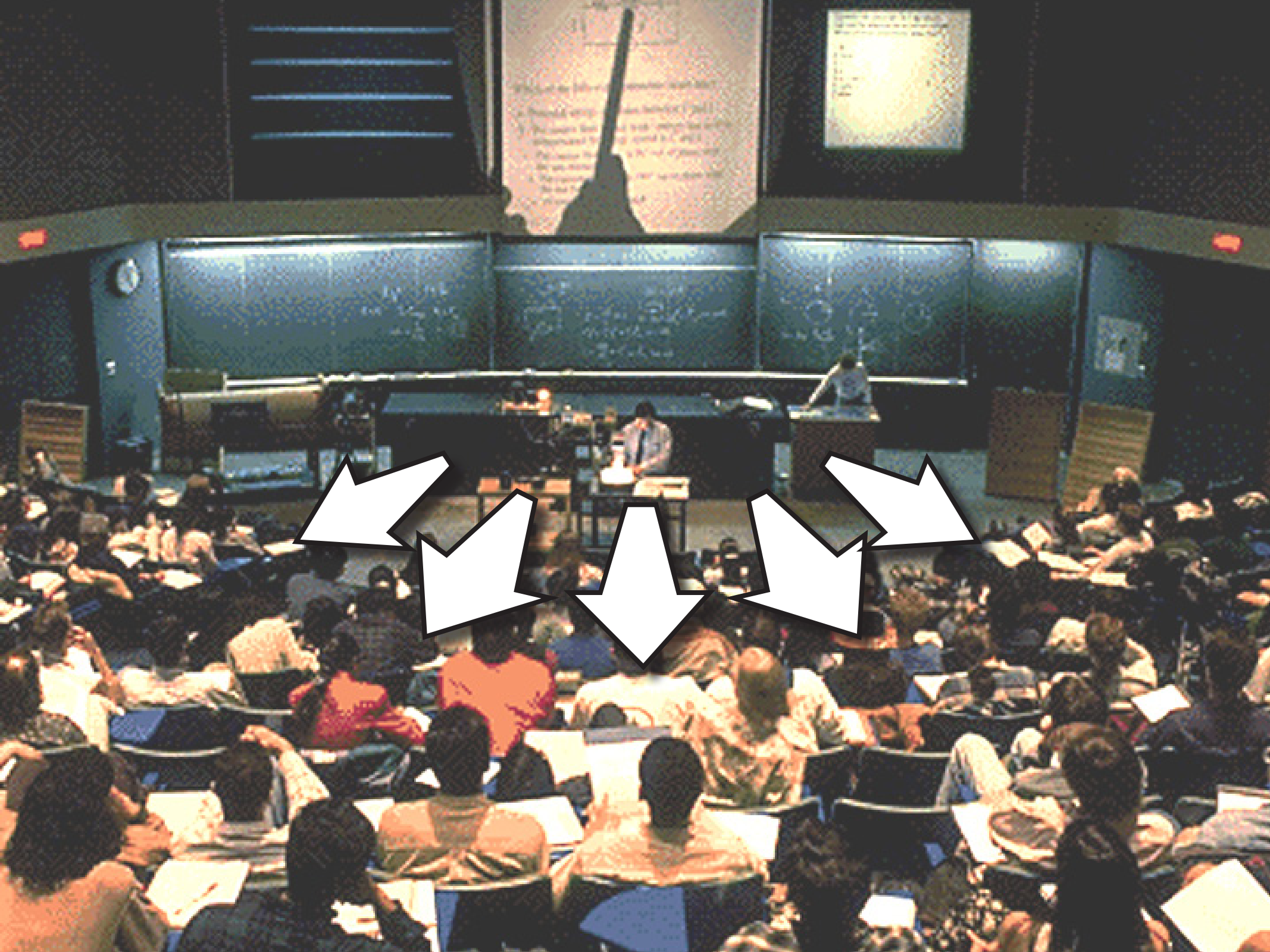

kosten
1. die Kosten (pl.)
2. kostbar
krank
455
1. die Krankheit, —, —en
377
magnificen
glo
1. magnifice
2. master
428
kennen irreg.
kannte-gekannt
1. kennen-lernen
2. erkennen
3. bekannt
4. der Bekannte (adj. as n.)
lendid
430
das Kind, —(e)s, —er
1. kindisch
2. kindlich
cow
der Kellner, —s, —
1. der Keller, —s, —
poco rit

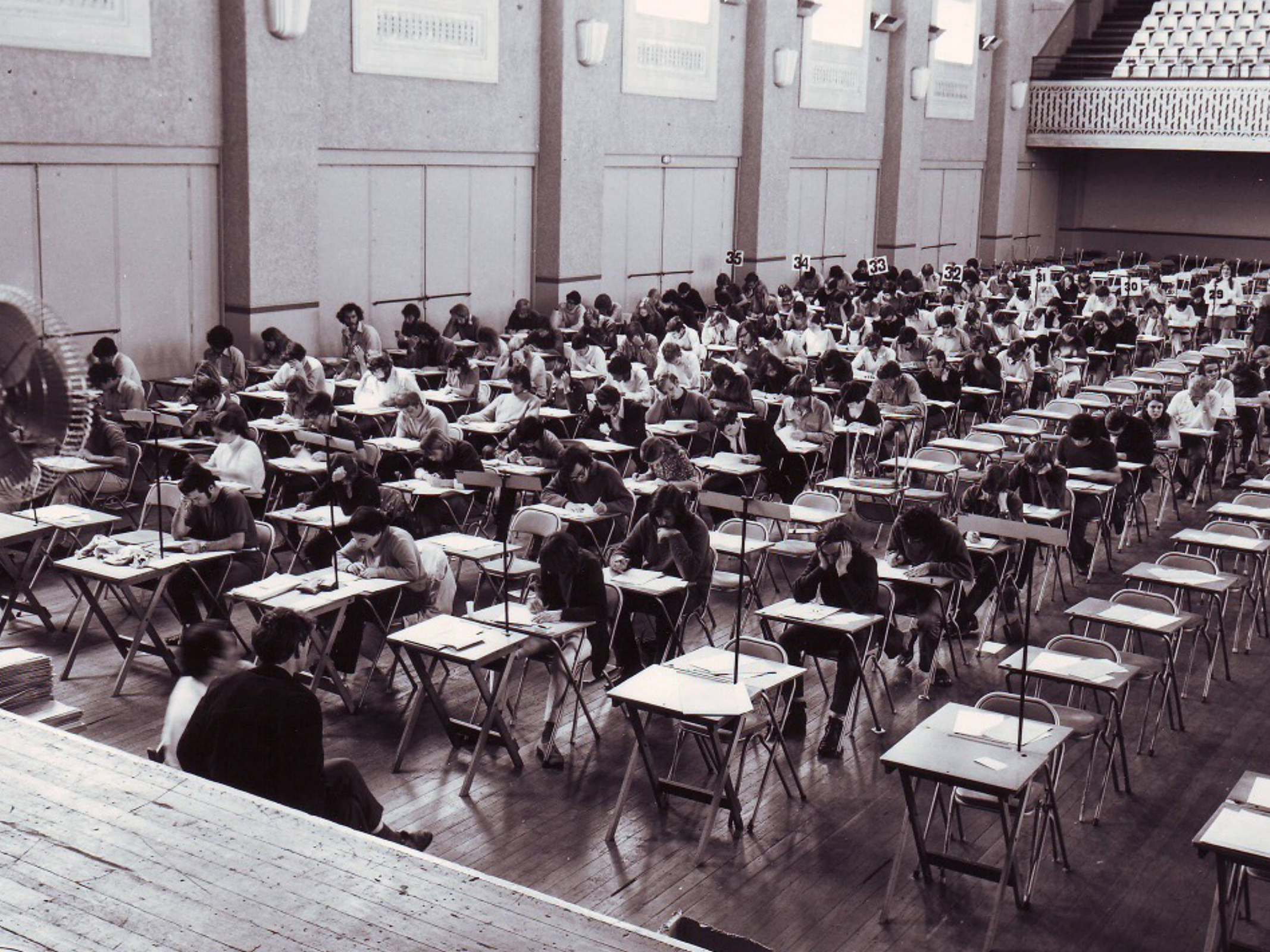

kosten
1. die Kosten (pl.)
2. kostbar
krank
die Krankheit, —, —en
455
377
kennen
kannte-gekannt
1. kennen-lernen
2. erkennen
3. bekannt
4. der Bekannte (adj. as n.)
428
Flashcard
Back
23 of 100
pedantic
adj. ostentatious in one's learning
Search
Popular
Subjects
Grade Levels
Standardized


# 35% retained after 1 week

we only guarantee
they'll pass the test

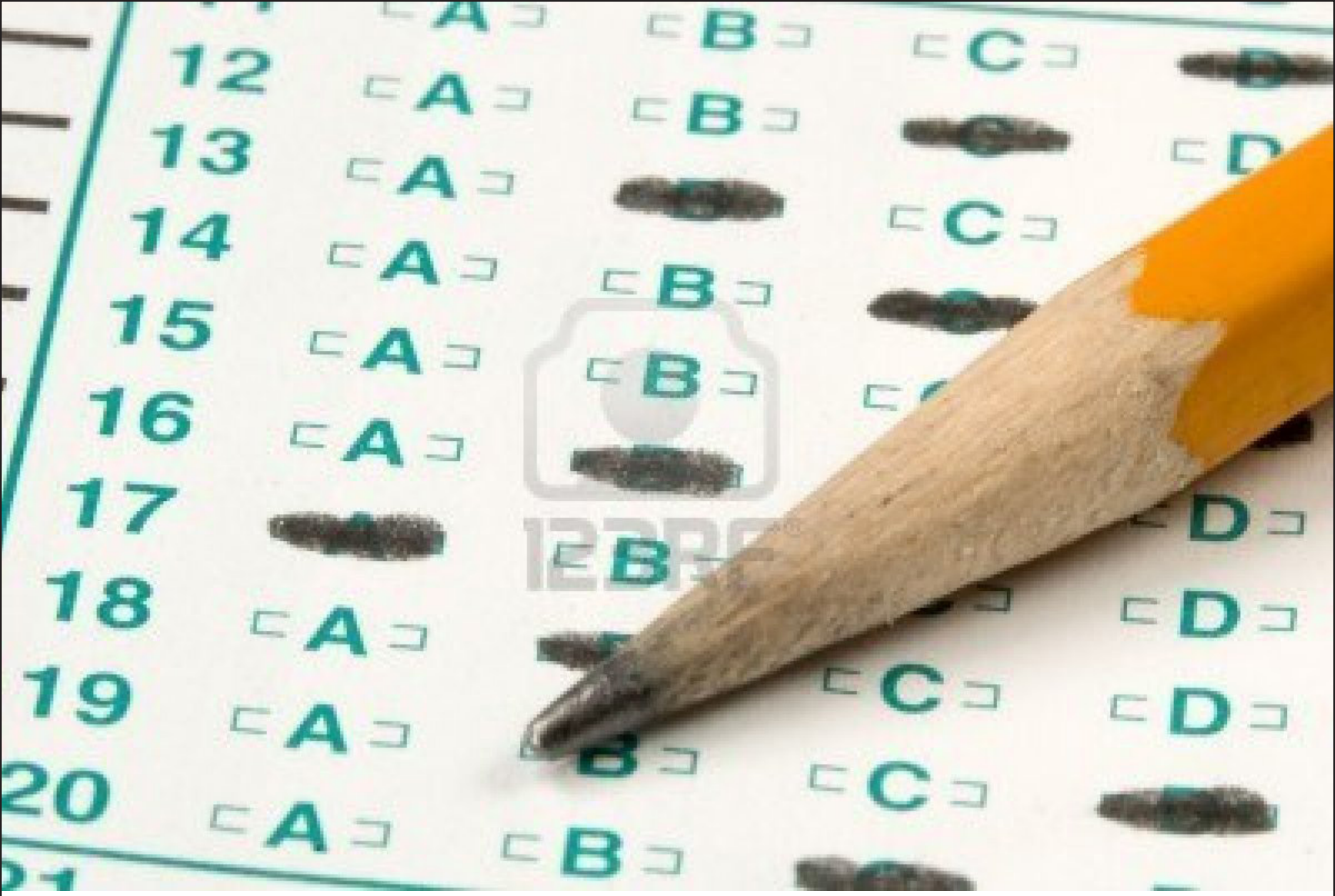
# 5-minute university



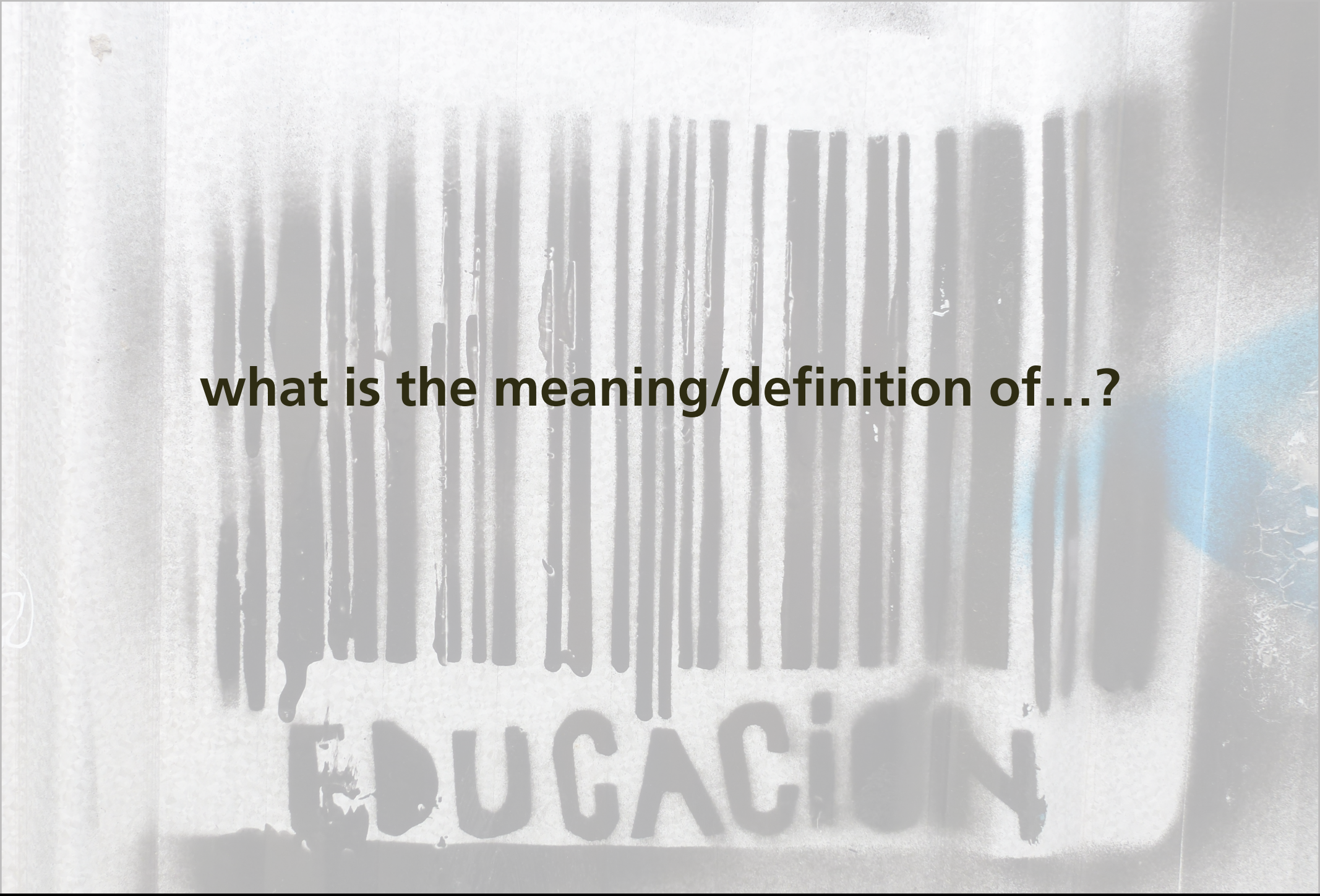

35
34
33
32
31
30
29

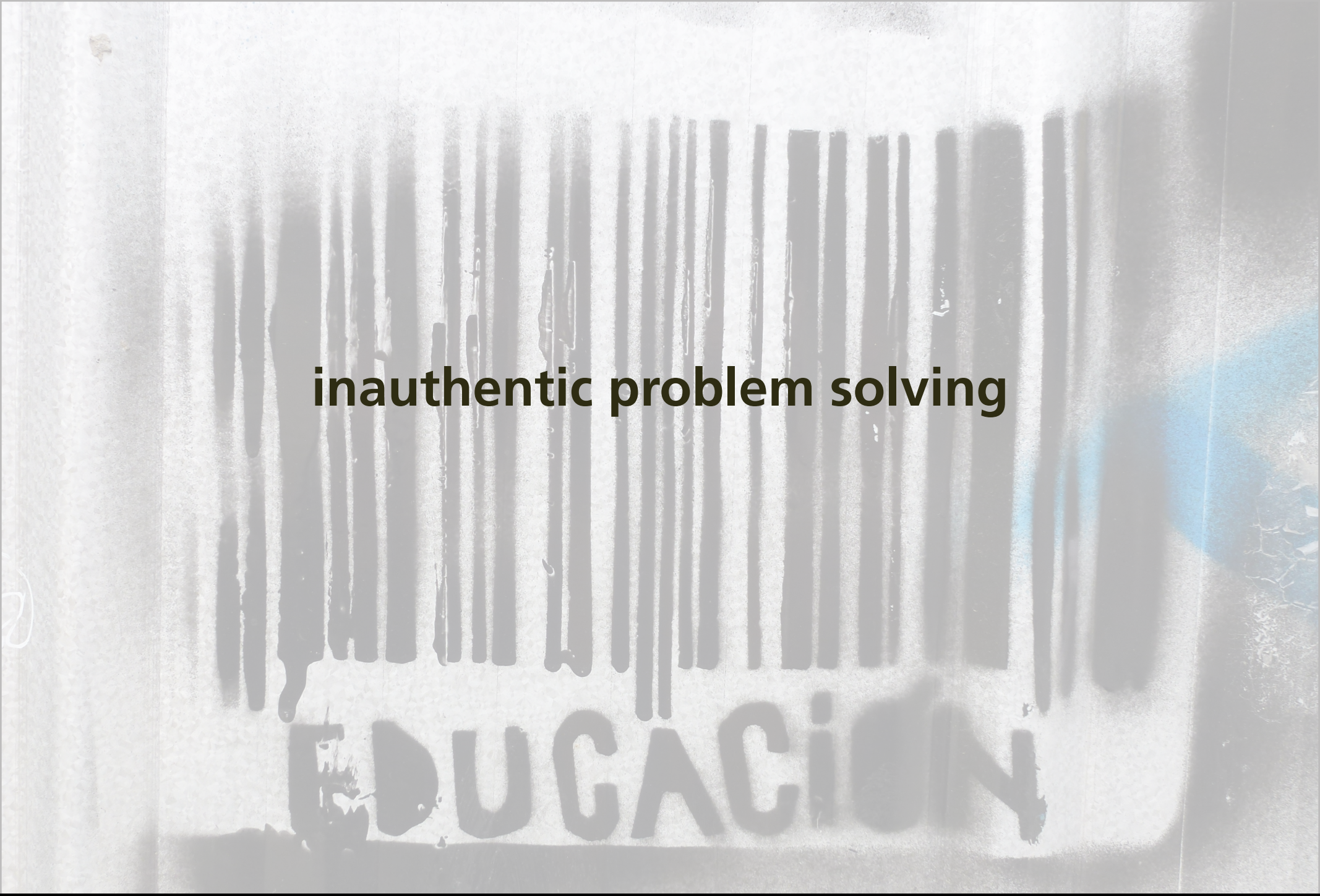
**assessment focussed on ranking and classifying,**

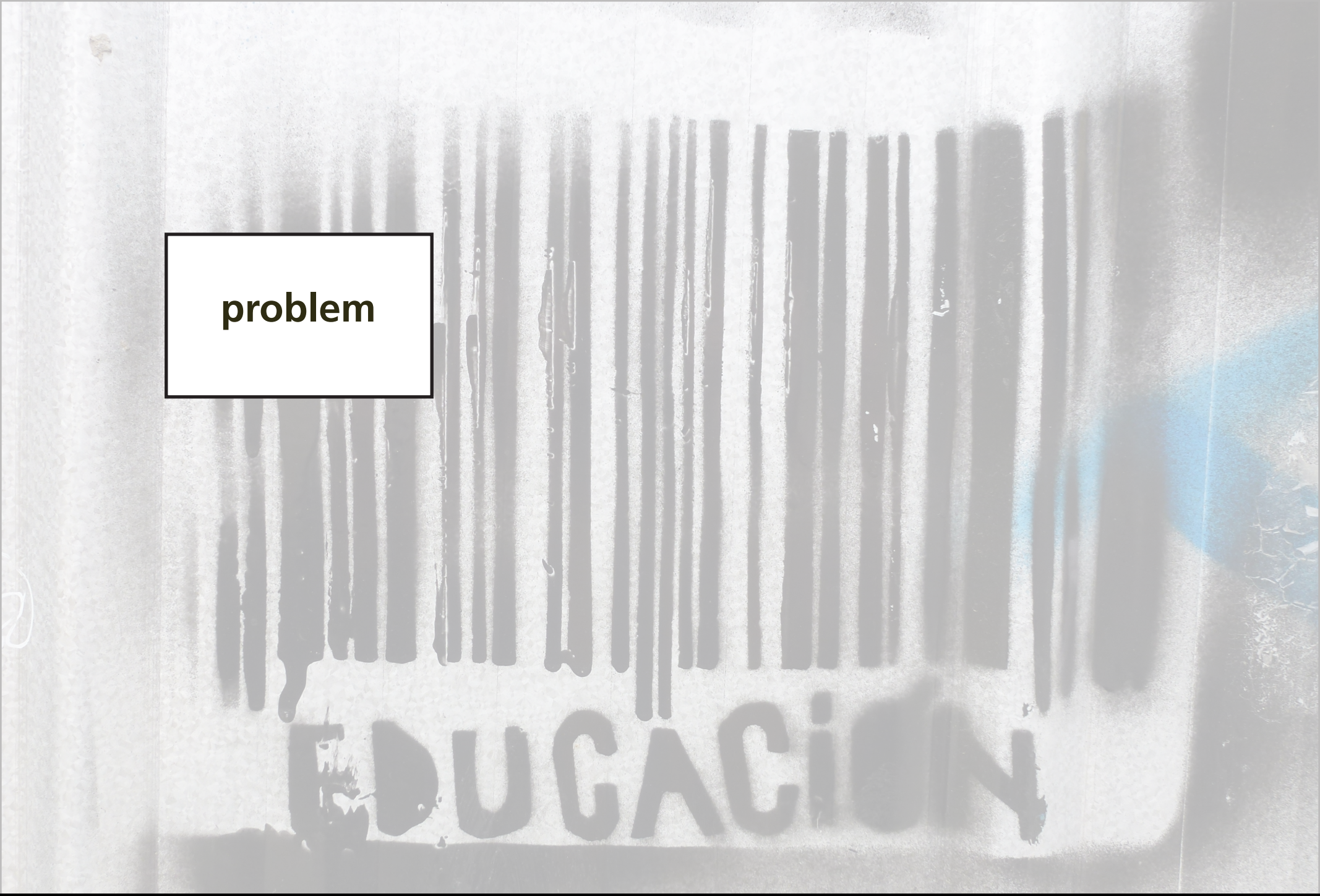
**not on developing 21st century skills**



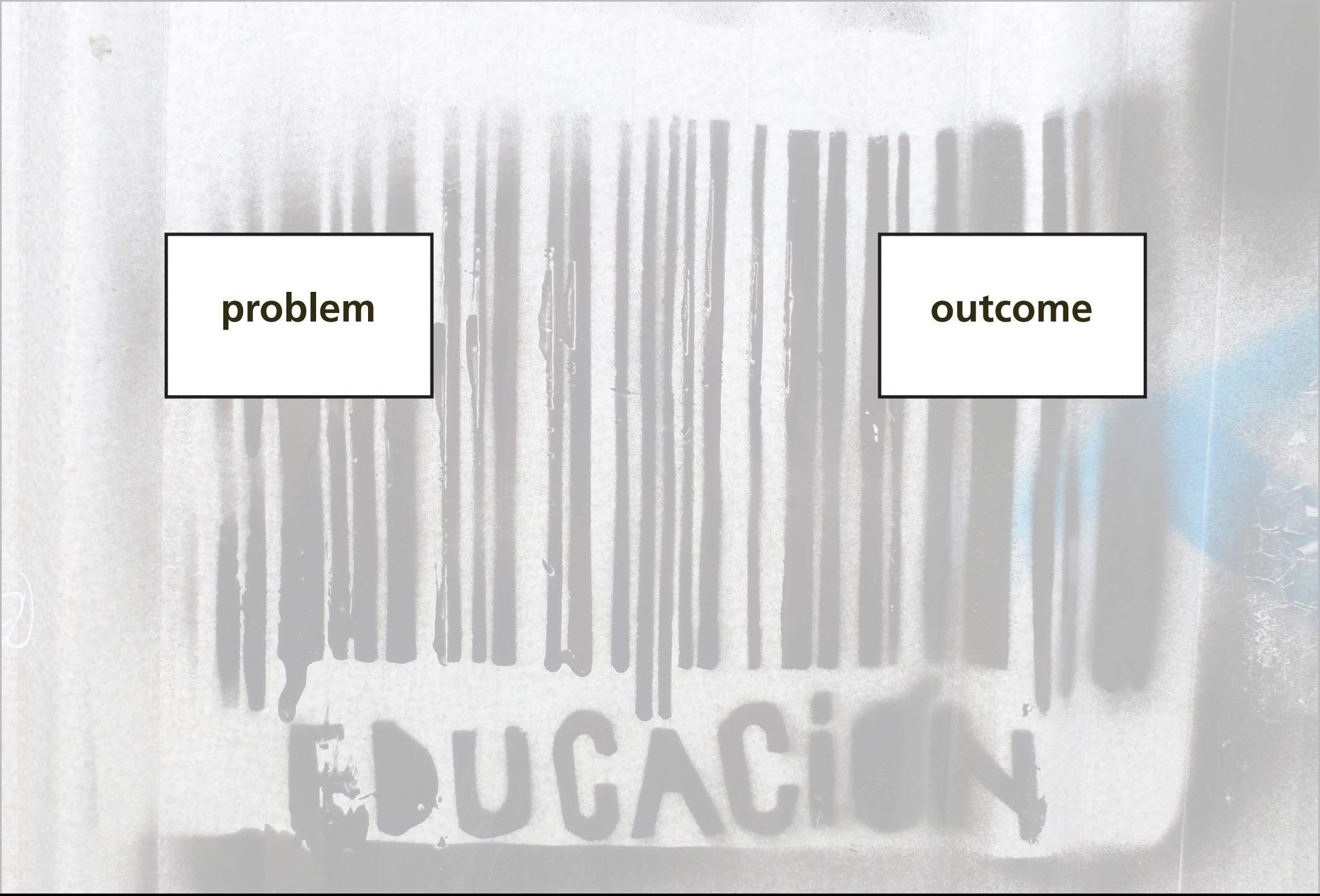
1 what 2 how 3 when


what is the meaning/definition of…?
EDUCACION


inauthentic problem solving
EDUCACION




1 what



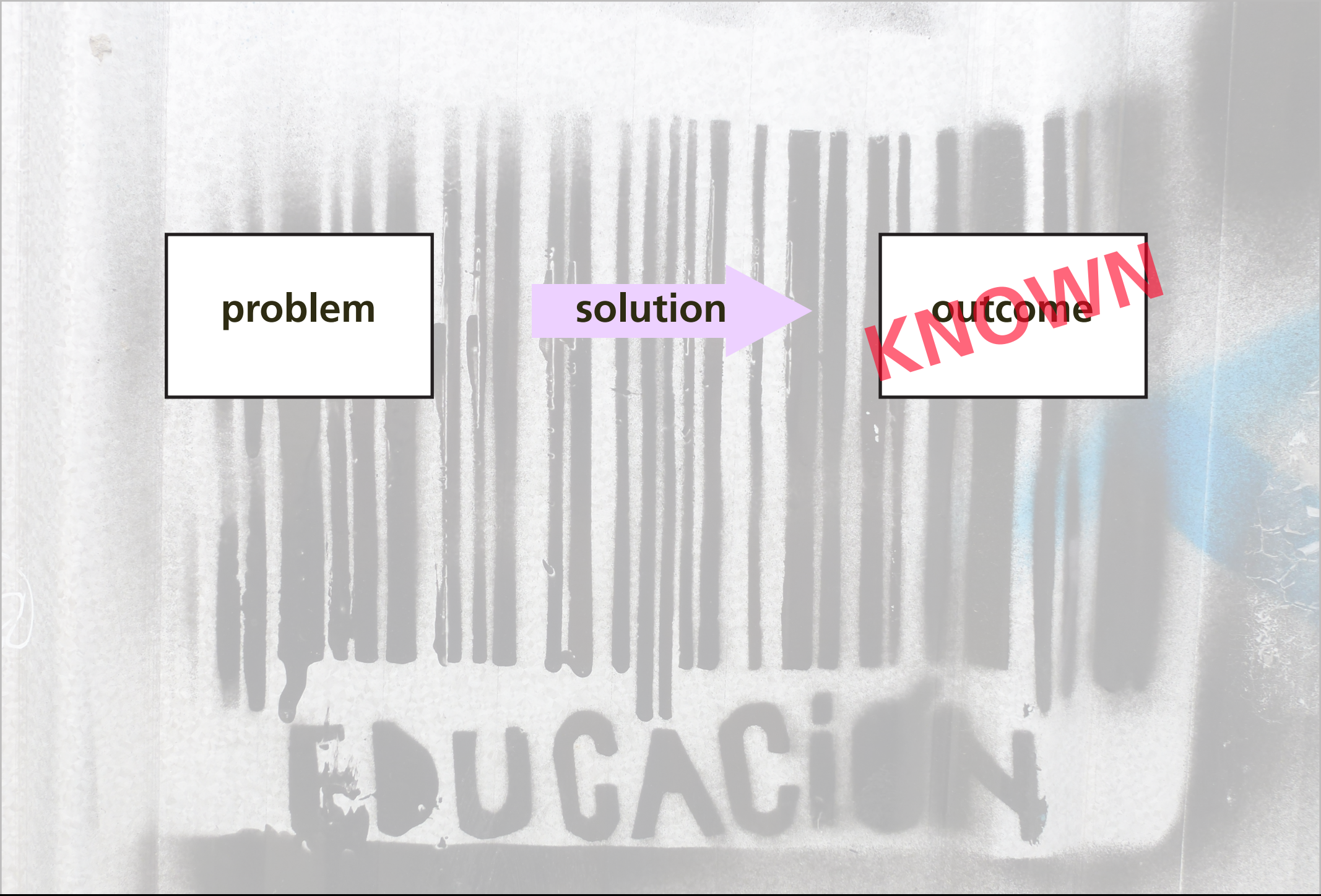

1 what

problem

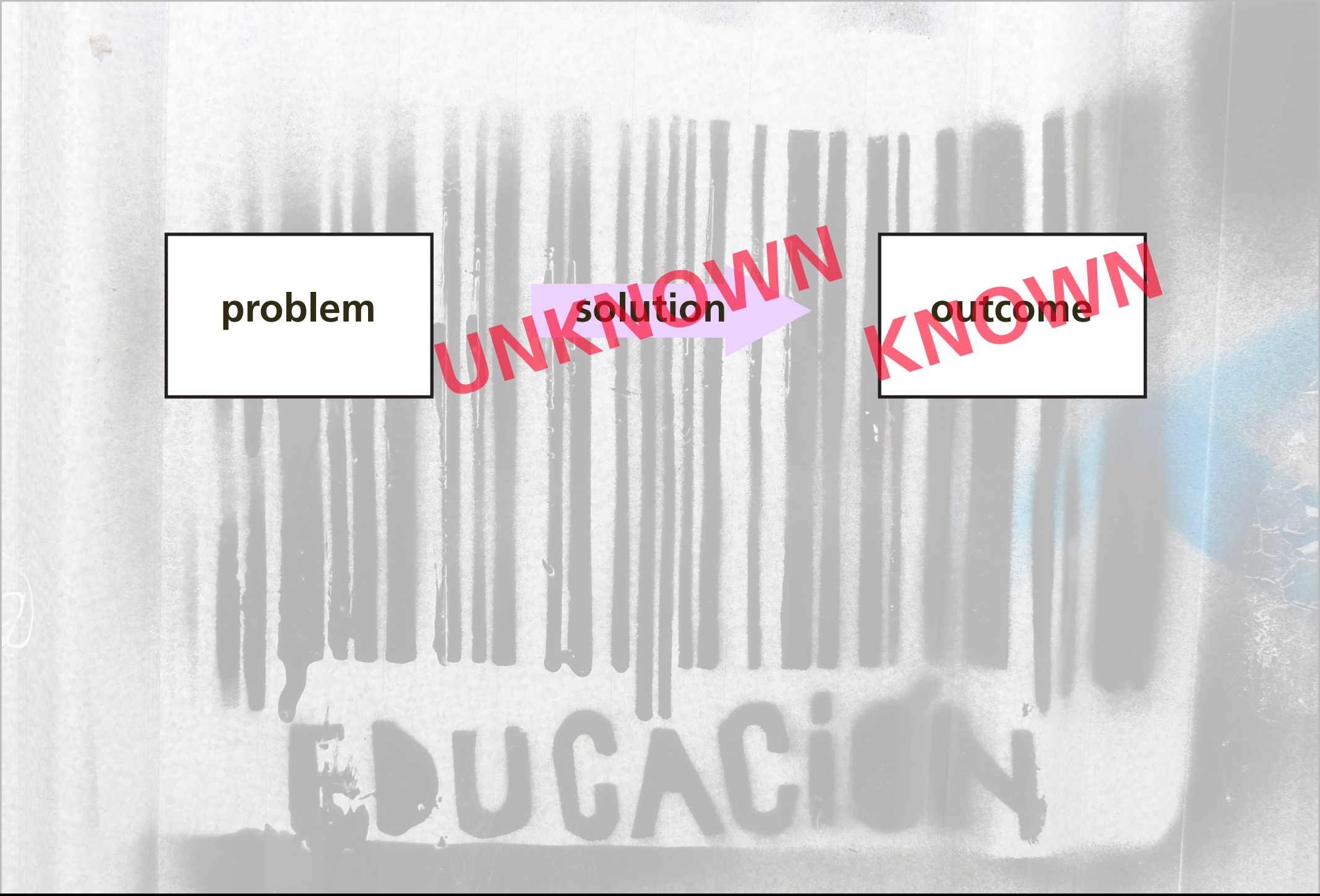
outcome

KNOWN


1 what




1 what




1 what

problem

solution

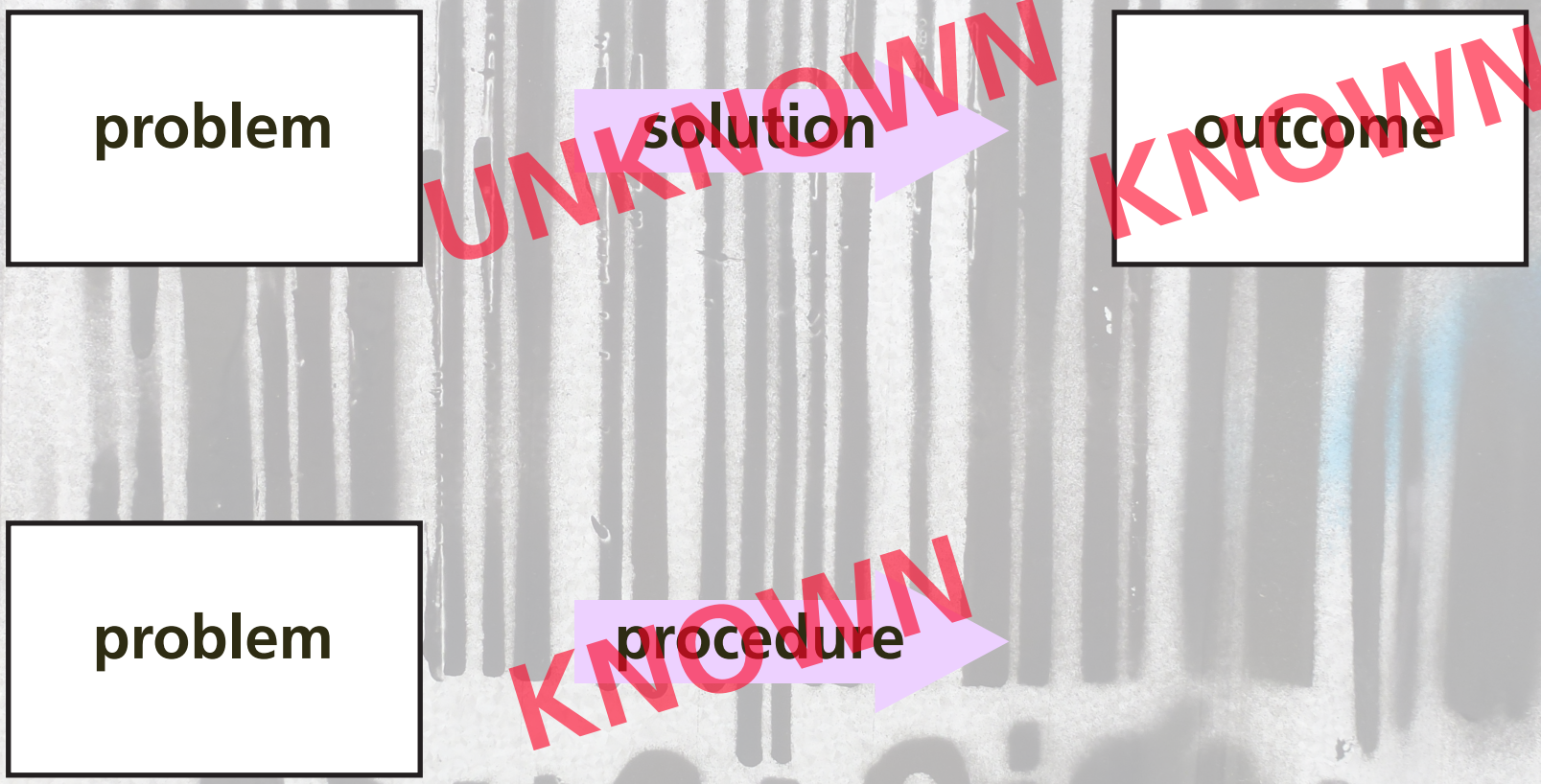
outcome

UNKNOWN

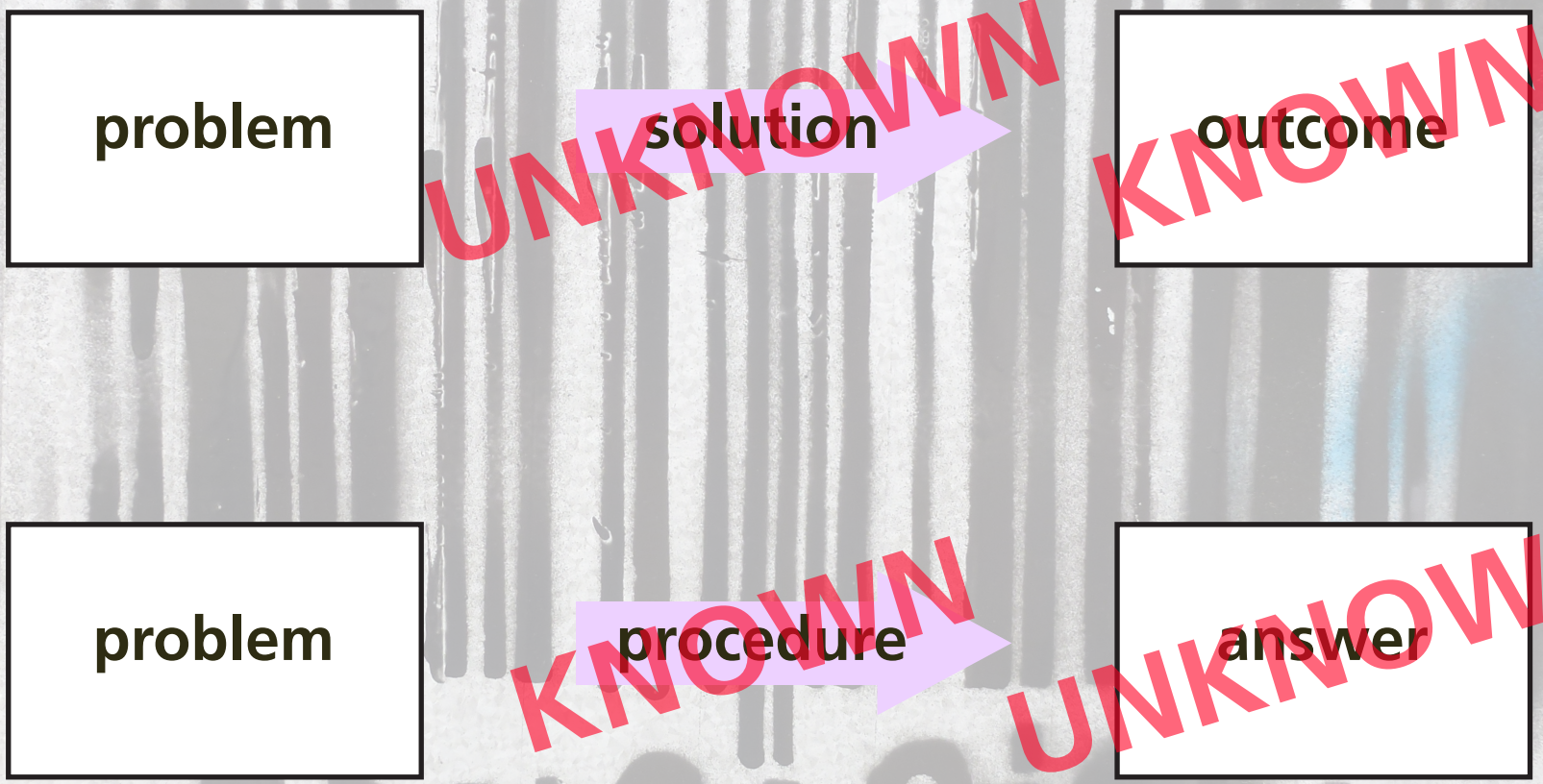
KNOWN

problem

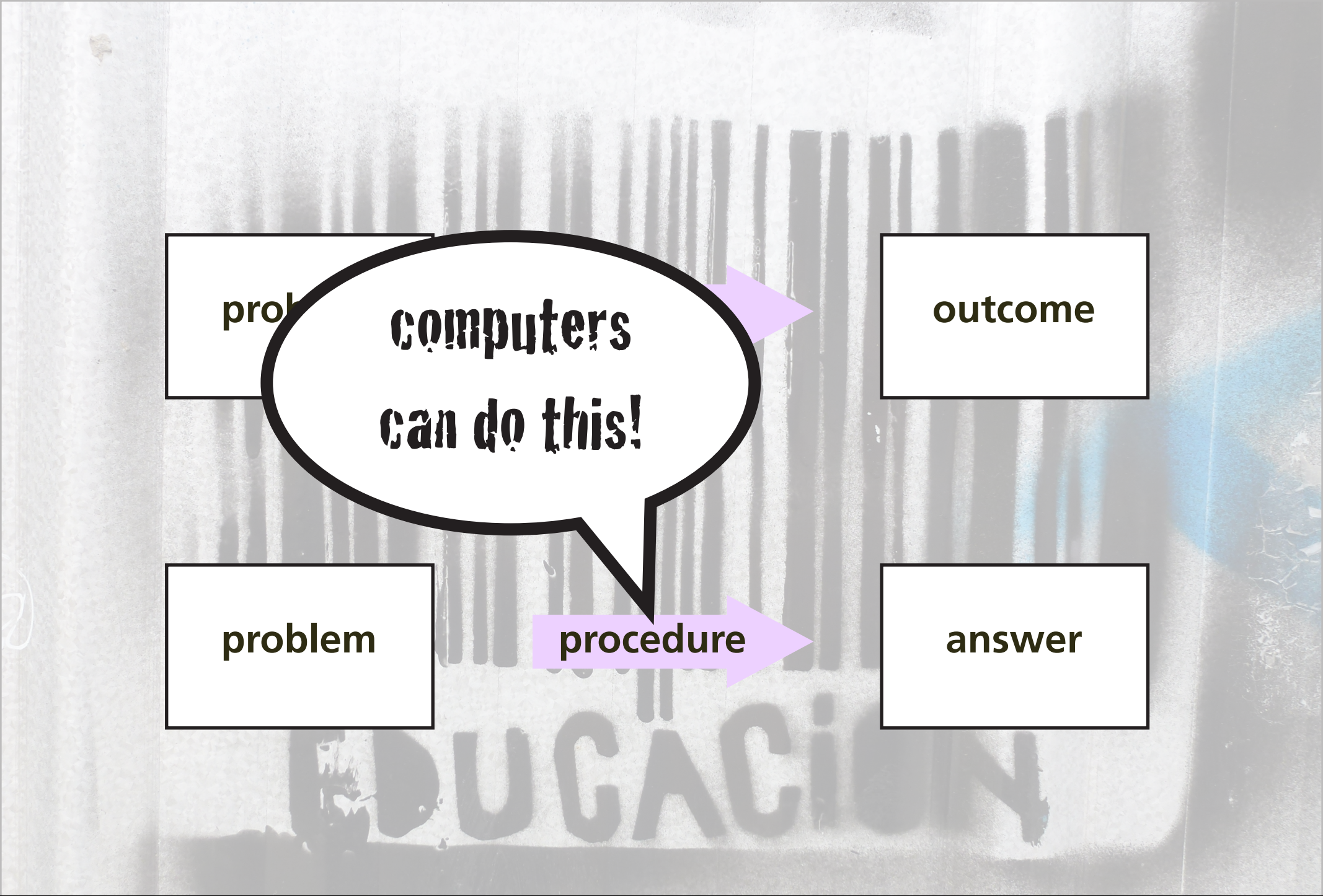
1 what


problem
solution
outcome
UNKNOWN
KNOWN
problem
procedure
KNOWN

1 what

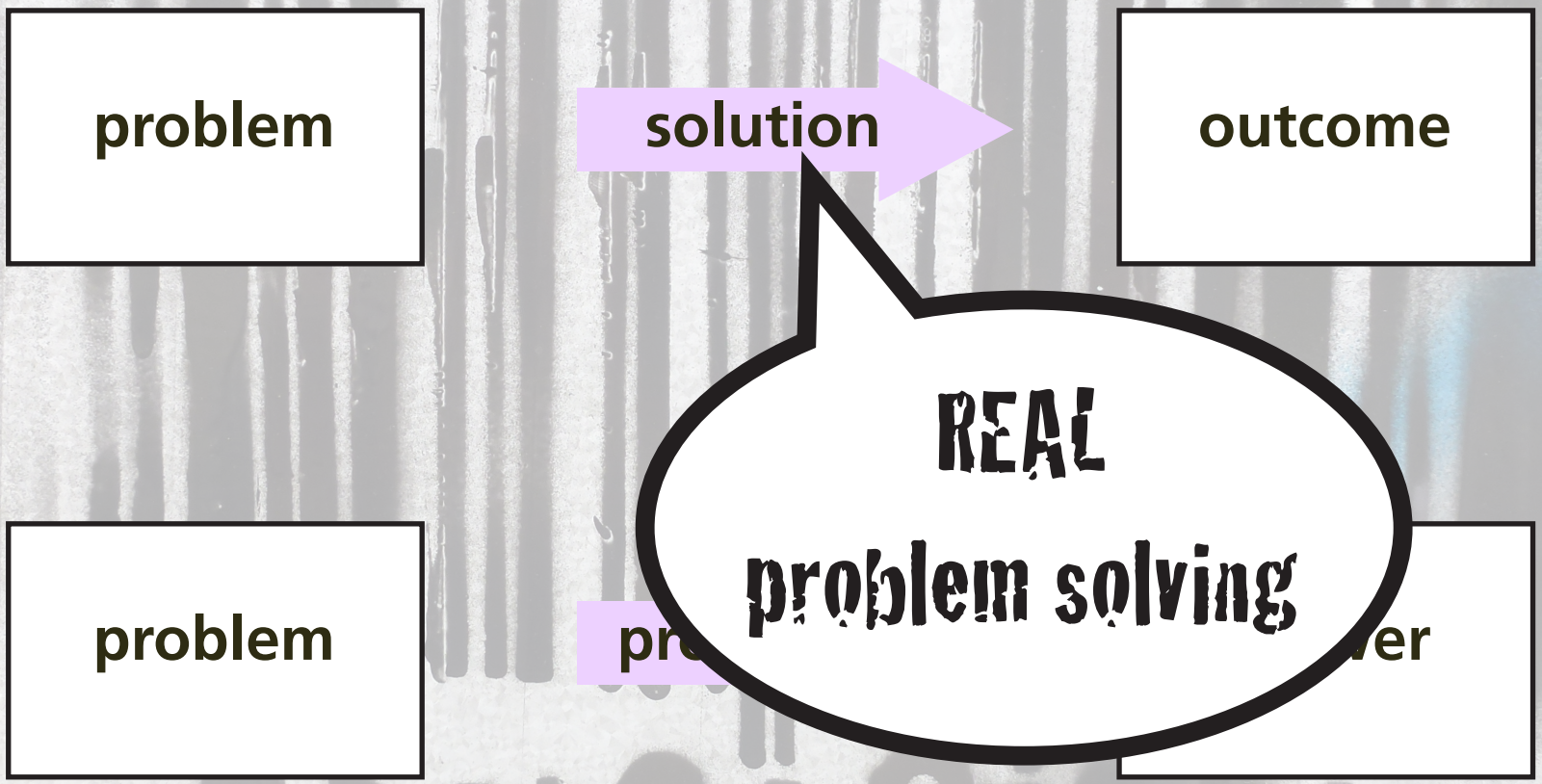

problem
solution
outcome
UNKNOWN
KNOWN
problem
procedure
answer
KNOWN
UNKNOWN

1 what

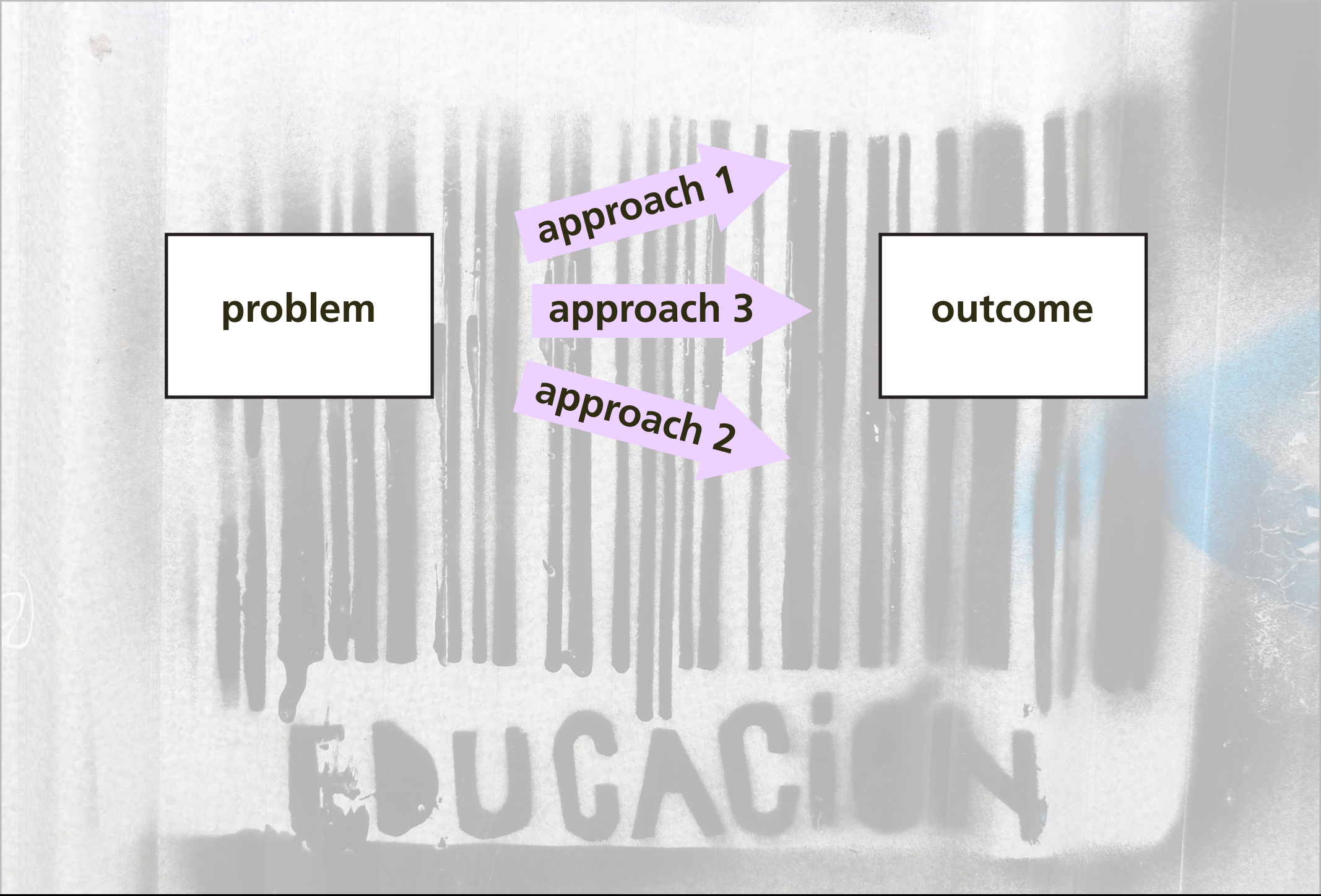

prob
computers
can do this!
outcome
problem
procedure
answer

# 1 what

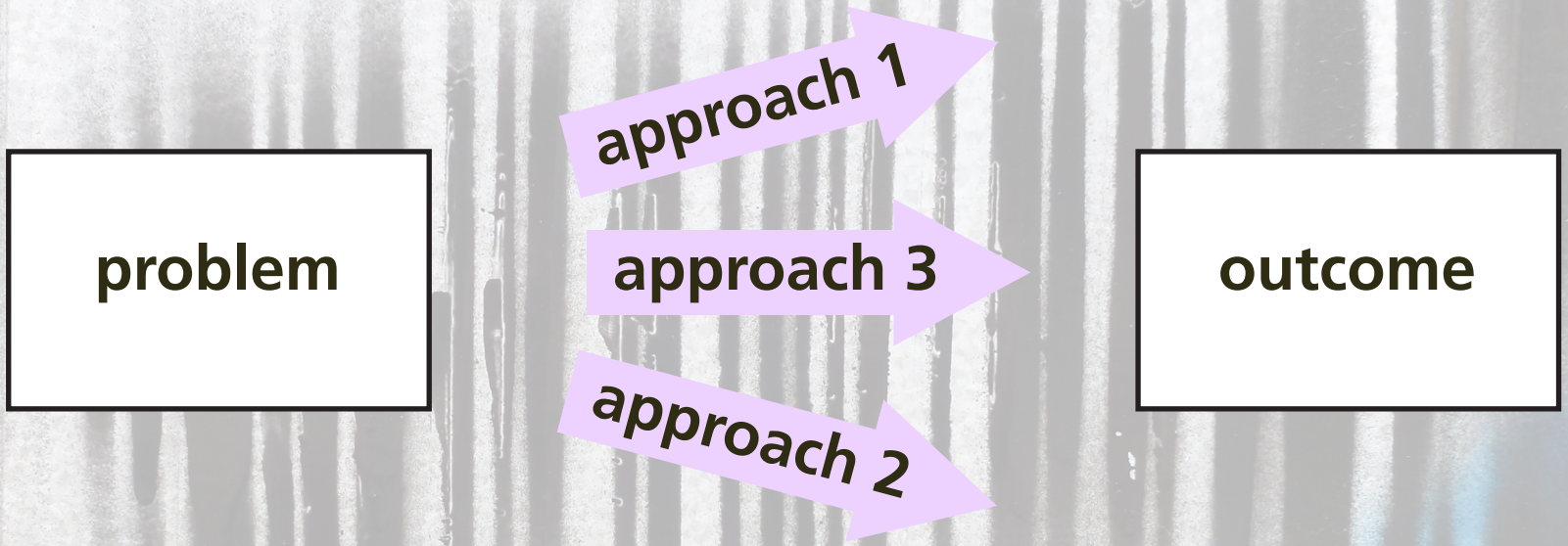
# 1 what




1 what



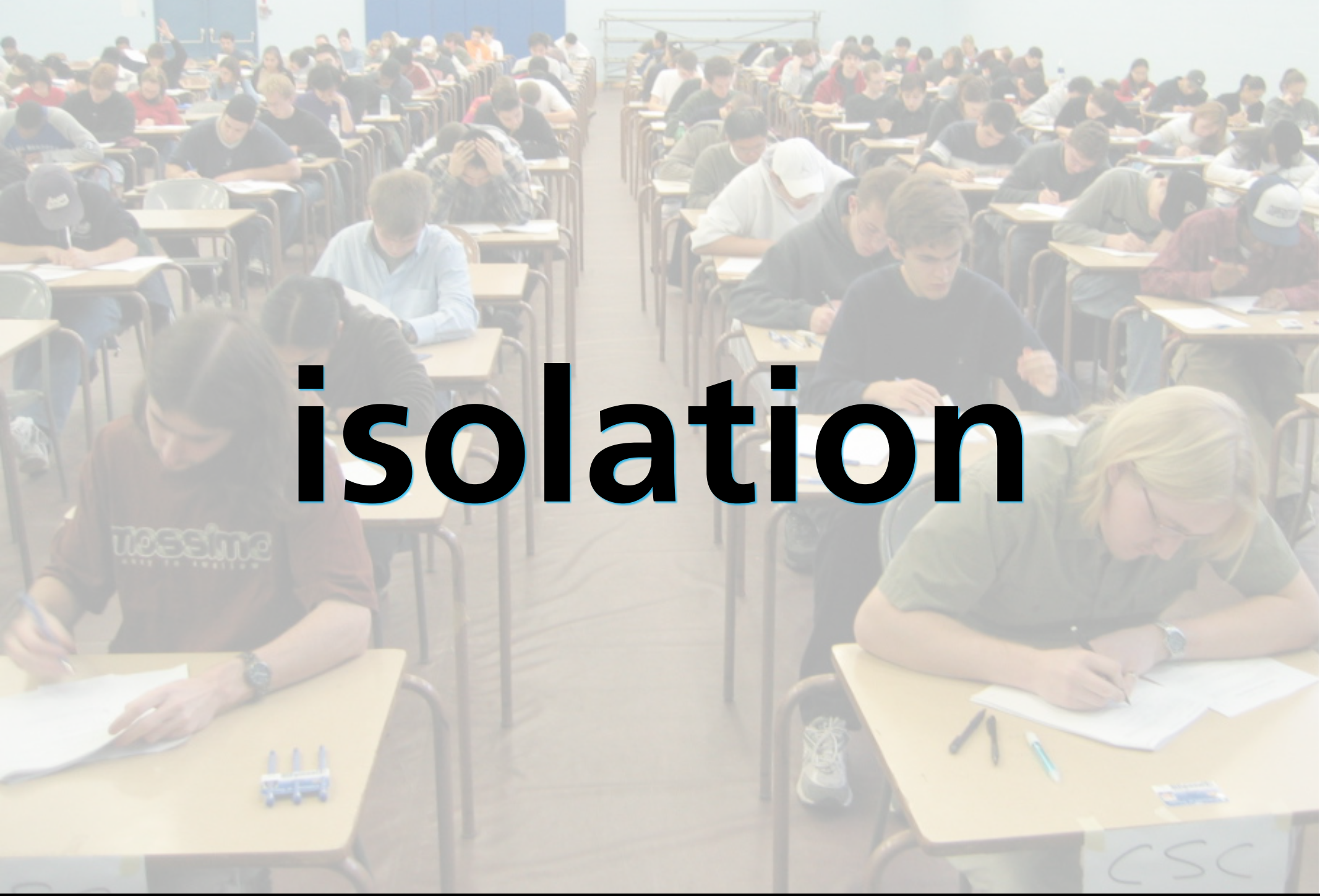

1 what




grading incompatible with real problem solving


1 what

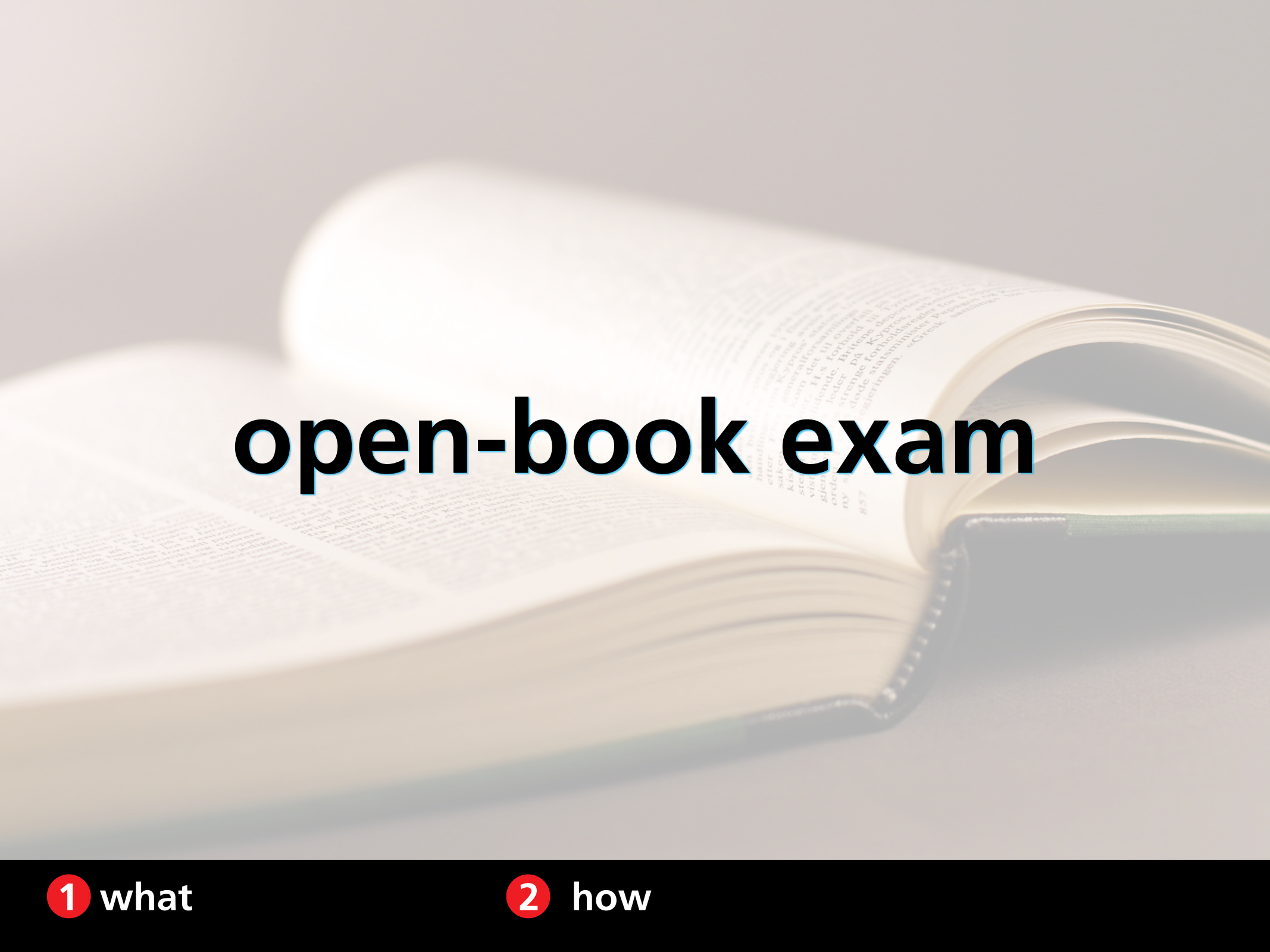
2 how



# isolation

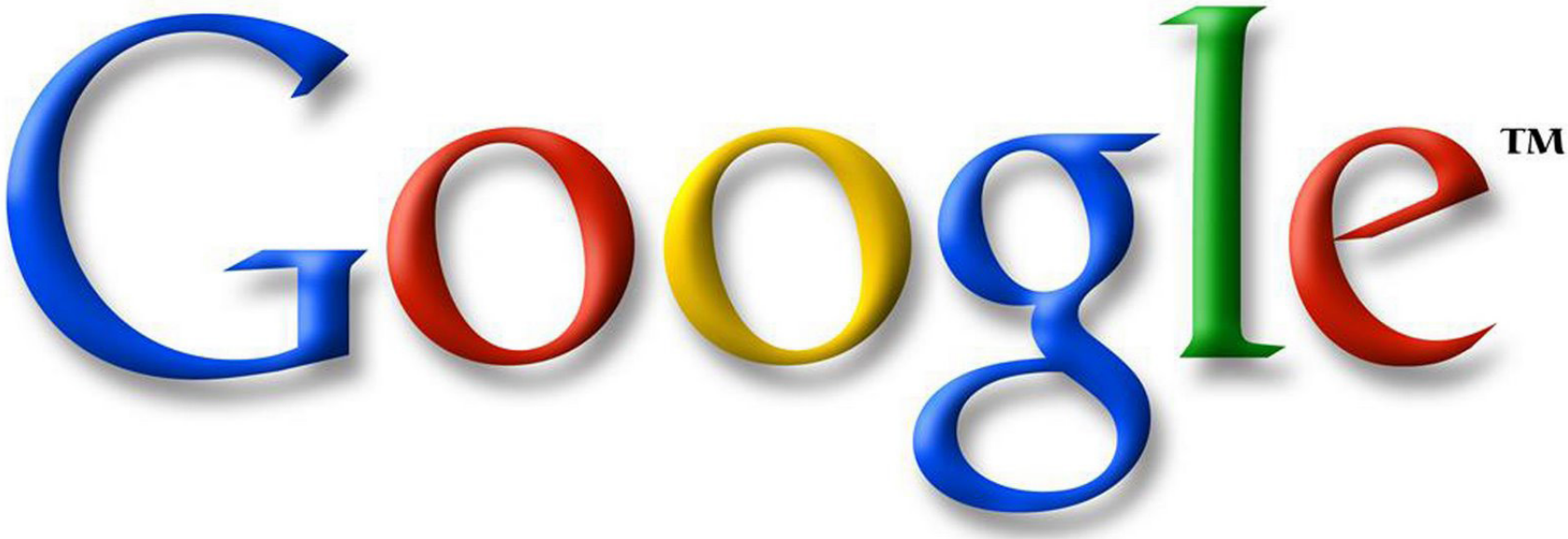
1 what

2 how



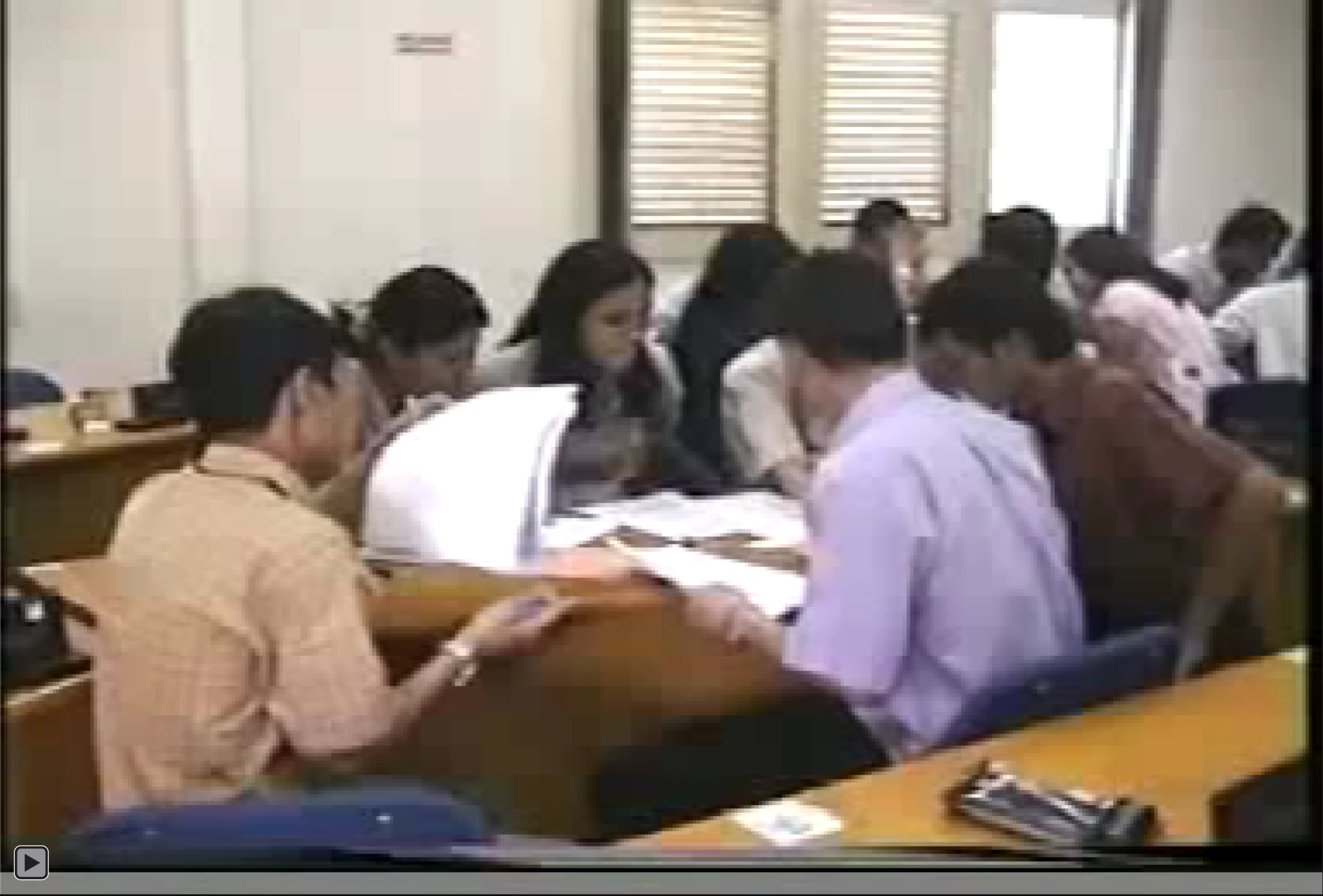

1 what

2 how



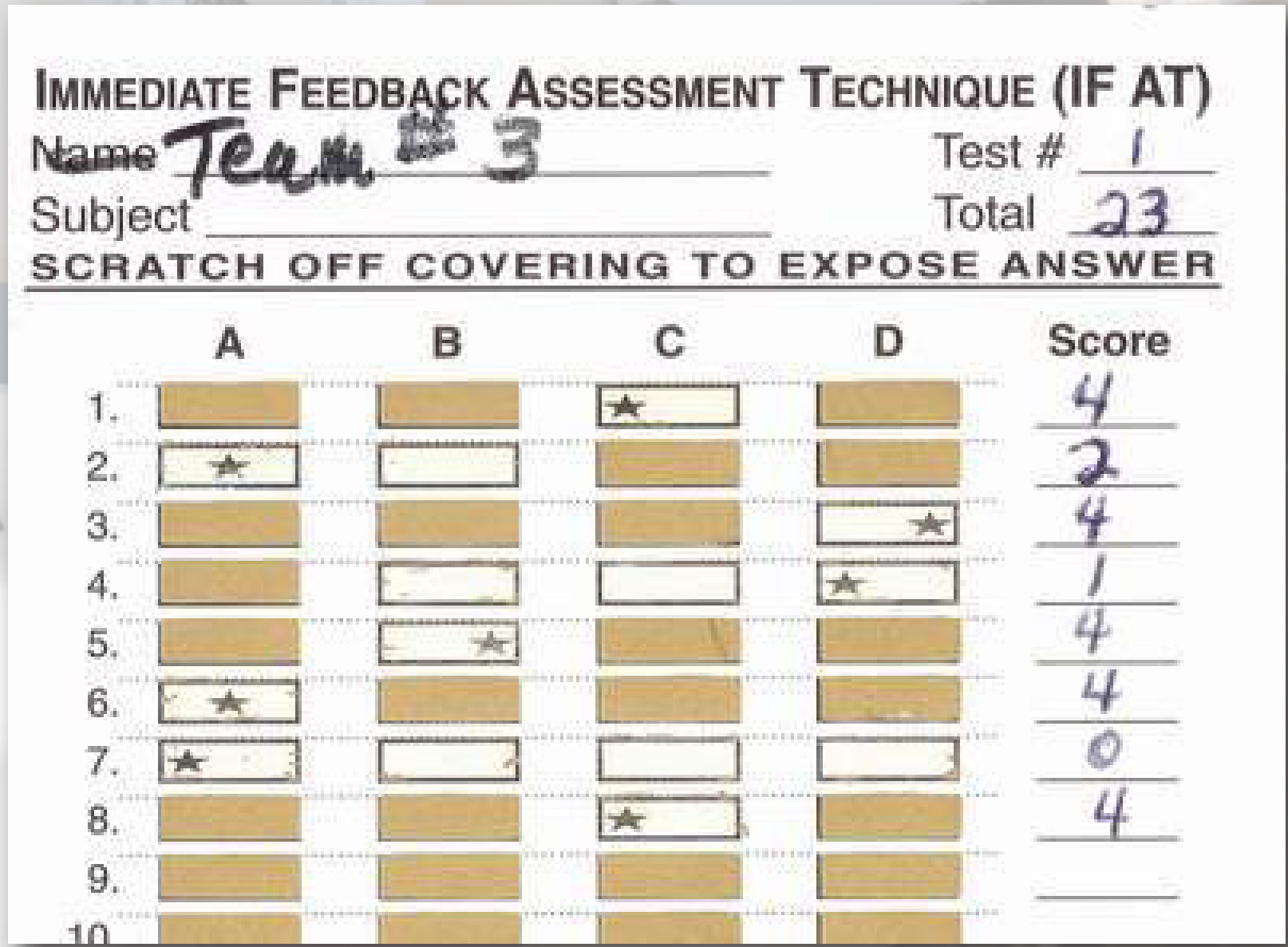

1 what

2 how



1 what

2 how



# IMMEDIATE FEEDBACK ASSESSMENT TECHNIQUE (IF AT)

Name Team # 3 Test # 1

Subject _____ Total 23

SCRATCH OFF COVERING TO EXPOSE ANSWER

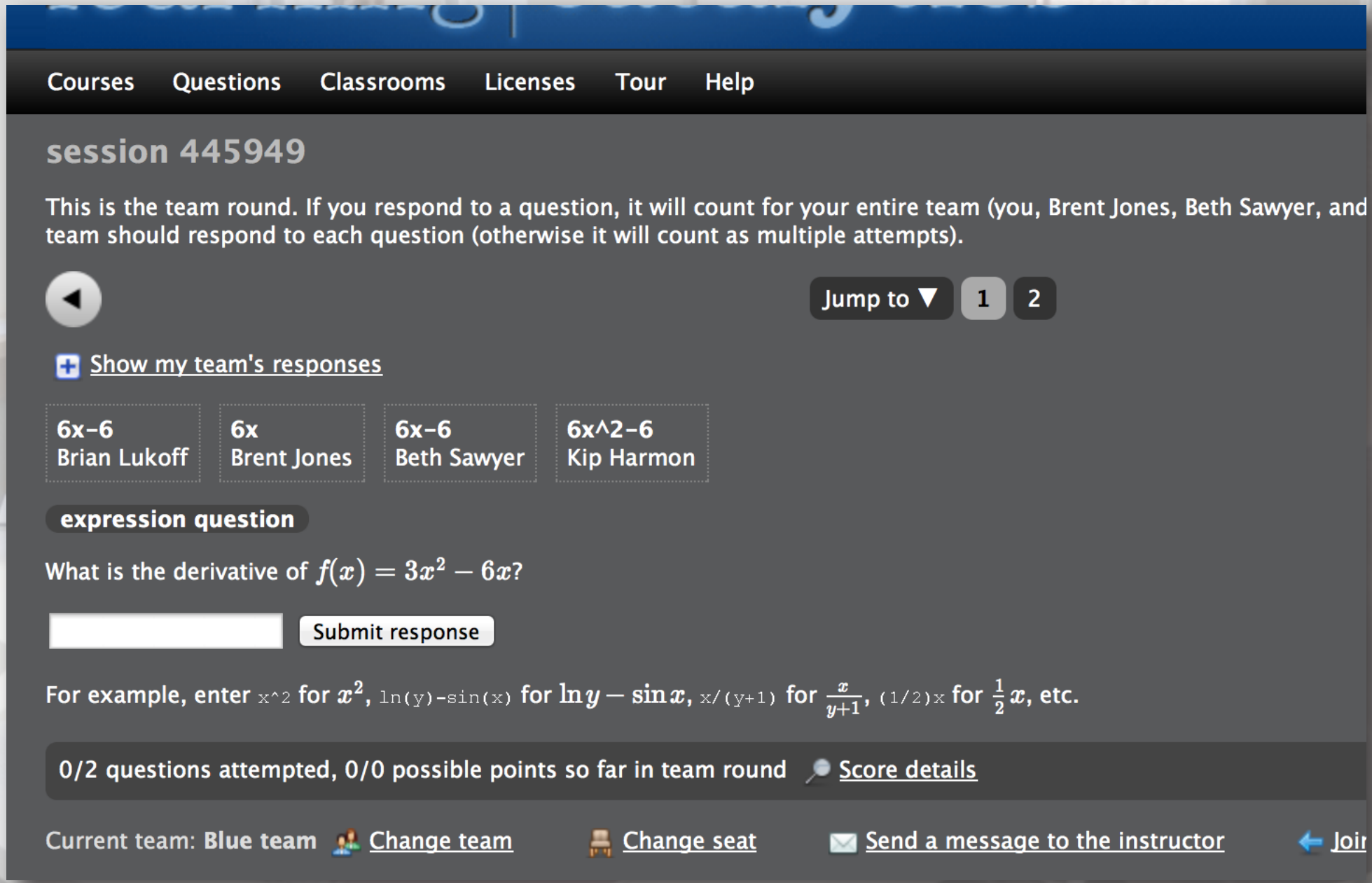
| | A | B | C | D | Score |
|---|---|---|---|---|---|
| 1. | | | ★ | | 4 |
| 2. | ★ | | | | 2 |
| 3. | | | | ★ | 4 |
| 4. | | | | ★ | 1 |
| 5. | | ★ | | | 4 |
| 6. | ★ | | | | 4 |
| 7. | ★ | | | | 0 |
| 8. | | | ★ | | 4 |
| 9. | | | | | |
| 10. | | | | | |

1 what

2 how

1 what

2 how


Courses
Questions
Classrooms
Licenses
Tour
Help
session 445949
This is the team round. If you respond to a question, it will count for your entire team (you, Brent Jones, Beth Sawyer, and
team should respond to each question (otherwise it will count as multiple attempts).
Jump to ▼
1
2
Show my team's responses
6x-6
Brian Lukoff
6x
Brent Jones
6x-6
Beth Sawyer
6x^2-6
Kip Harmon
expression question
What is the derivative of $f(x) = 3x^2 - 6x$?
Submit response
For example, enter x^2 for $x^2$, ln(y)-sin(x) for $\ln y - \sin x$, x/(y+1) for $\frac{x}{y+1}$, (1/2)x for $\frac{1}{2}x$, etc.
0/2 questions attempted, 0/0 possible points so far in team round
Score details
Current team: Blue team
Change team
Change seat
Send a message to the instructor
Joi

1 what

2 how

1 what

2 how

(4) We will use spherical coordinates: $0 \le \rho \le \sqrt{4}$, $0 \le \theta \le 2\pi$, $0 \le \varphi \le \pi$. The integral is thus:

$$\int_{\rho=0}^{\sqrt{4}} \int_{\theta=0}^{2\pi} \int_{\varphi=0}^{\pi} (\rho \cos\varphi)(\rho \sin\varphi)\, \rho^2 \, d\varphi \, d\theta \, d\rho$$

$$= \left\{ \int_{\rho=0}^{\sqrt{4}} \rho^3 \, d\rho \right\} \left\{ \int_{\theta=0}^{2\pi} d\theta \right\} \left\{ \frac{1}{2} \int_{\varphi=0}^{\pi} \sin(2\varphi)\, d\varphi \right\} = \boxed{0}$$

Since the third integral equals 0.

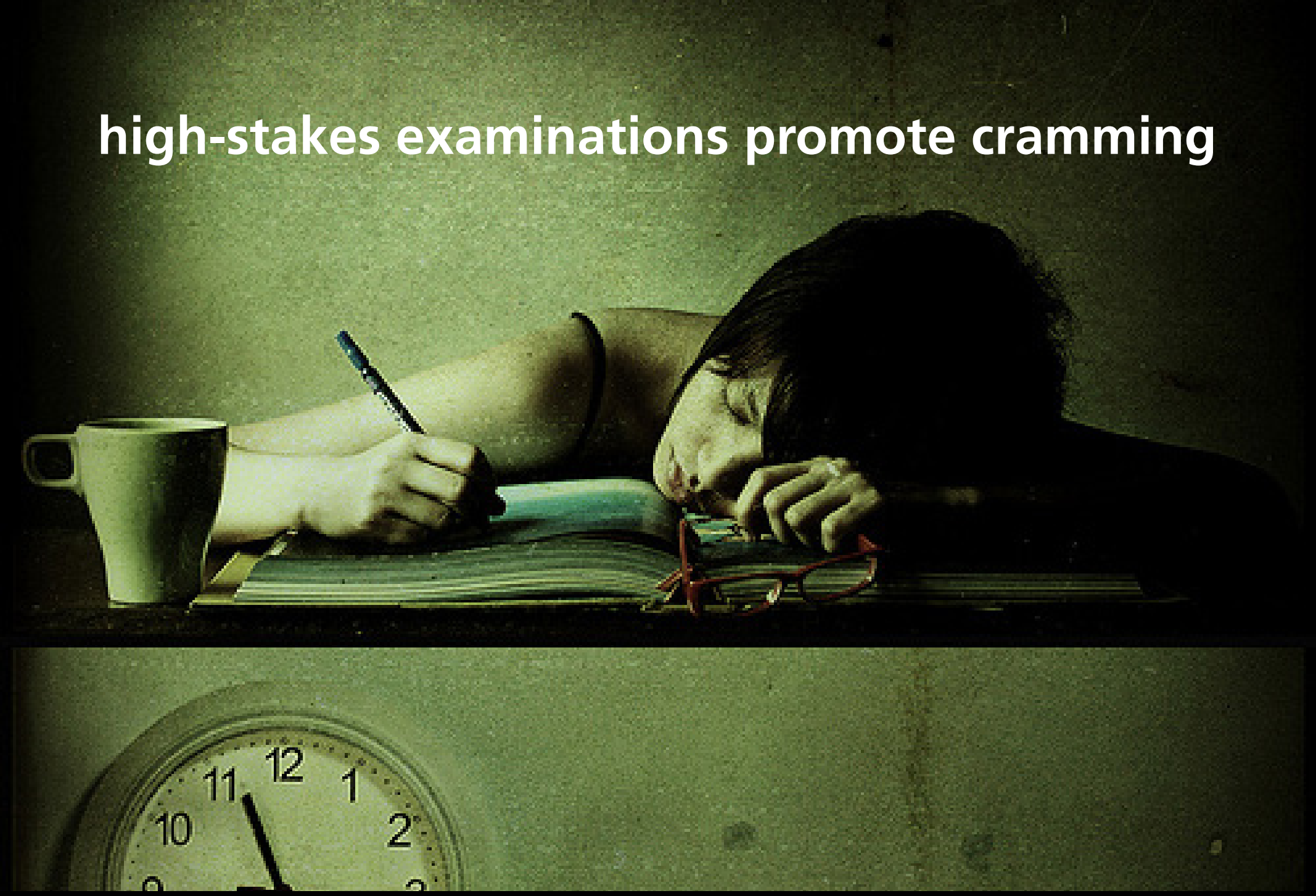
---

(5) Direction vectors for the plane are

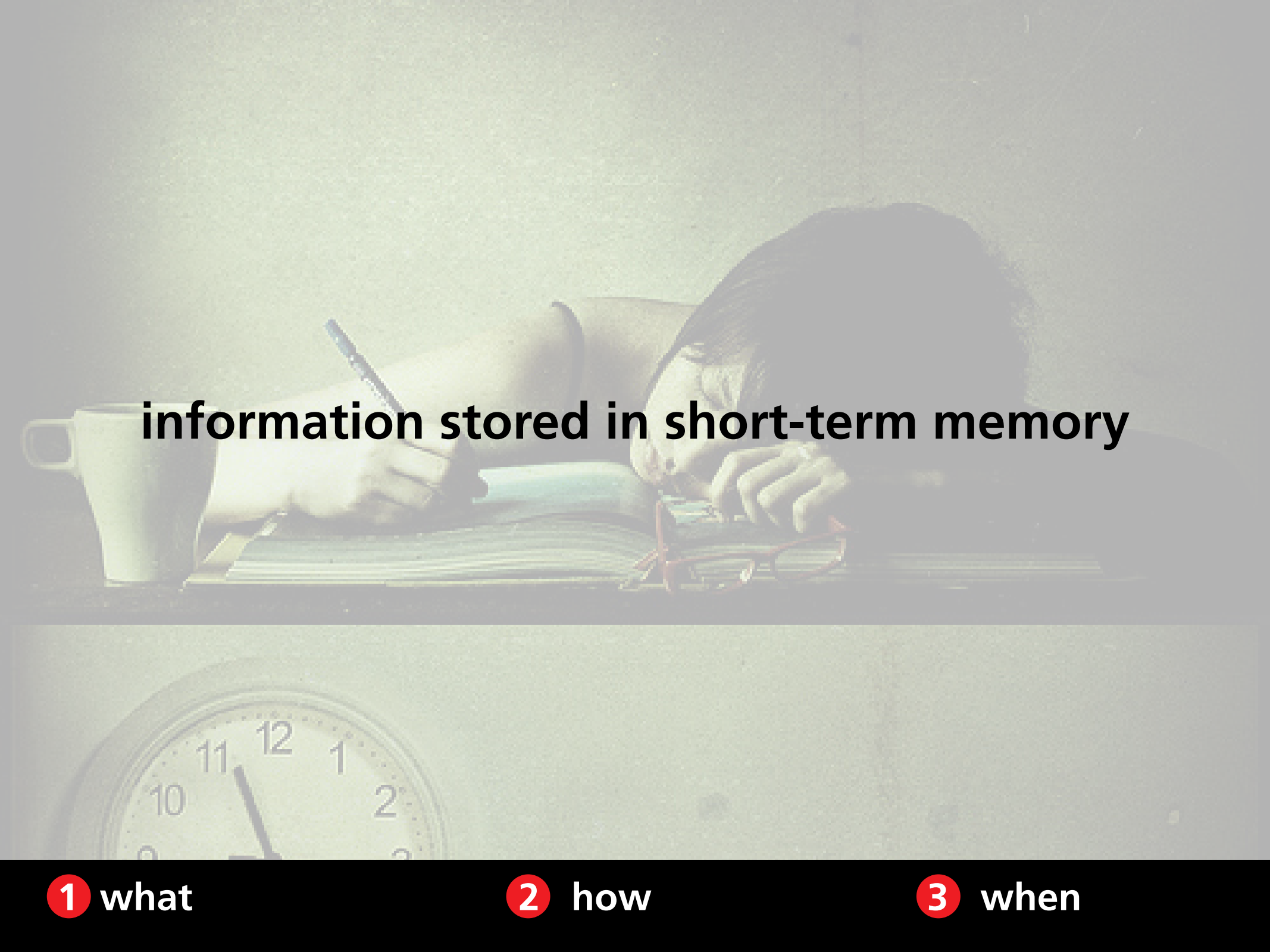
$$\begin{pmatrix} 1 \\ 1 \\ 0 \end{pmatrix} \quad \begin{pmatrix} 1 \\ 0 \\ -1 \end{pmatrix}$$

Final Exam

# high-stakes examinations promote cramming



1. what
2. how
3. when

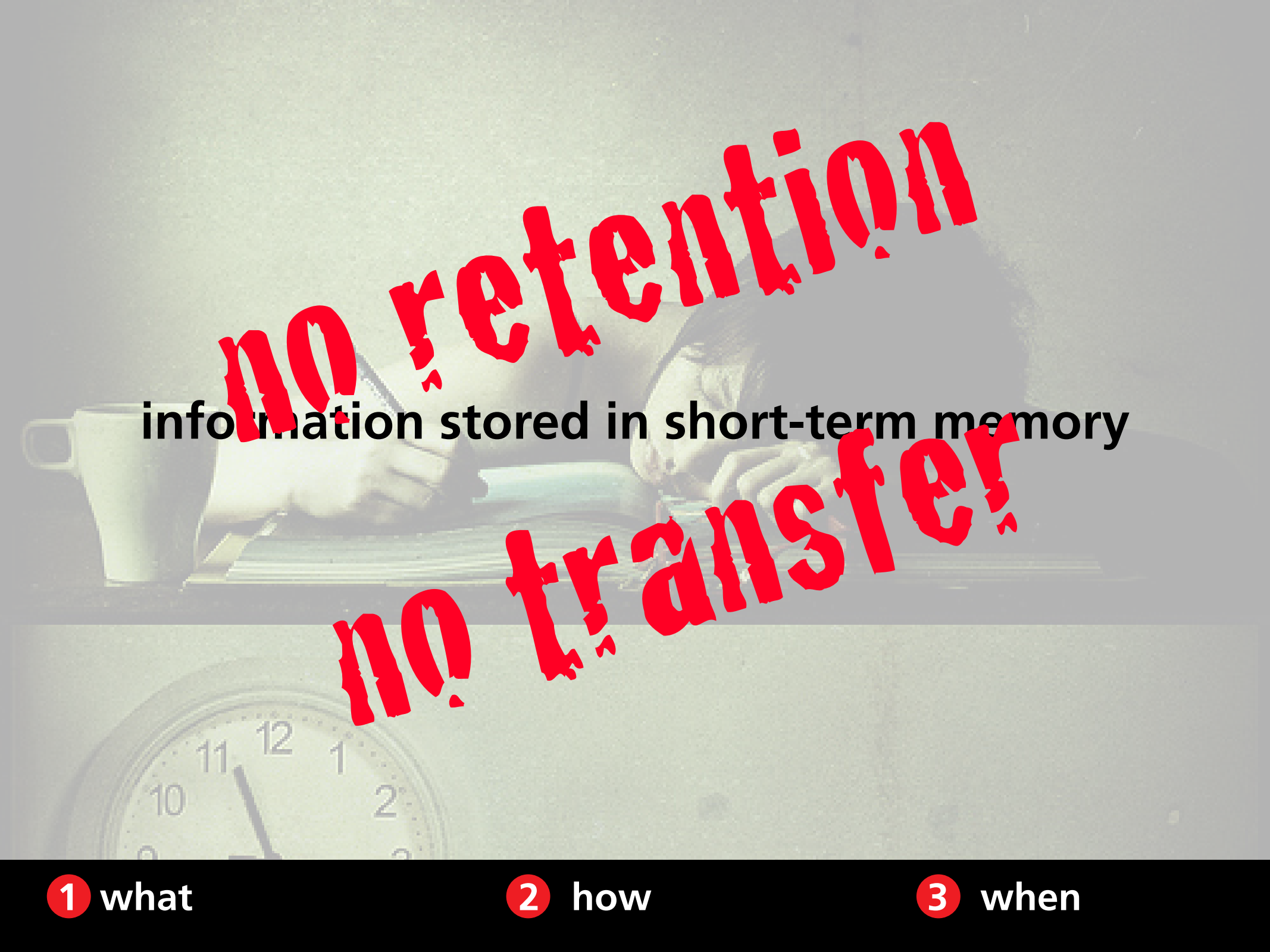


information stored in short-term memory

1 what

2 how

3 when




1 what 2 how 3 when

high-stakes assessment:

silent killer of educational innovation

1 what 2 how 3 when

chemical reaction does one of two things to involved substa

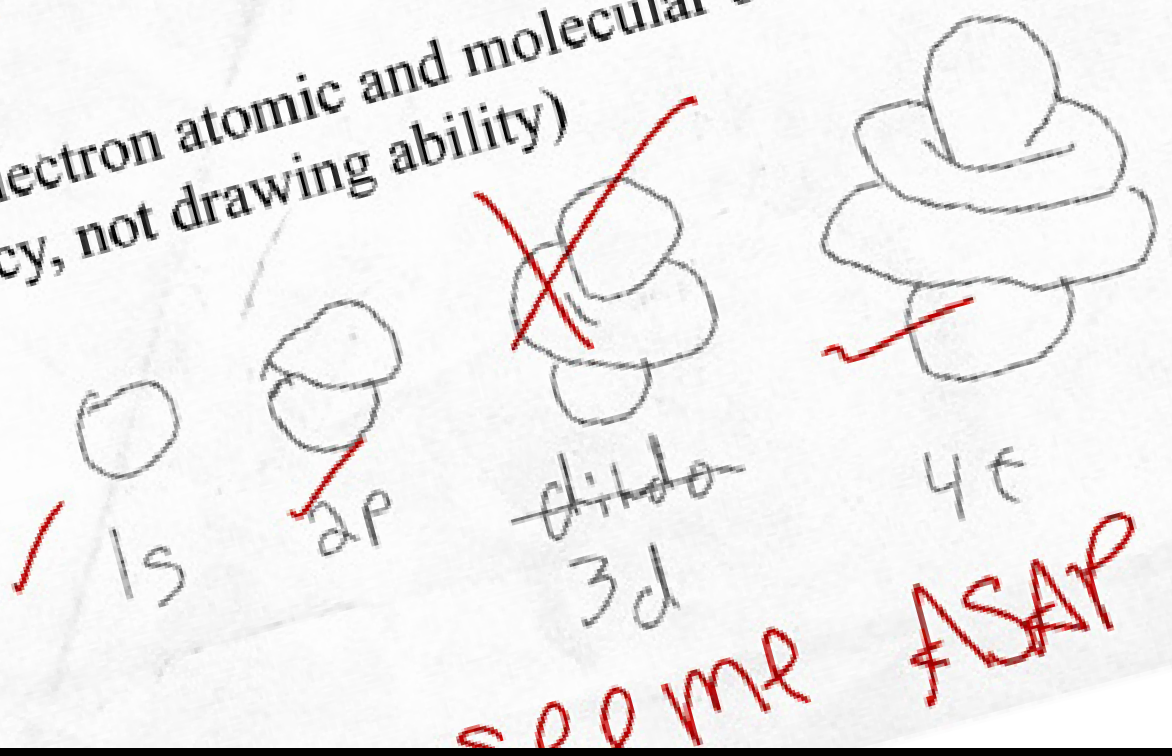
Increases or decreases the energy of the substances involved ... sometimes through the form of heat or light

nick in front of
s wearing a white
Victorias Secret Thing

inappropriate

A CREDIT

w a representation of electron atomic and molecular orbitals 1s, 2p, 3d and 4f.
ore not based on acuracy, not drawing ability)




see me ASAP

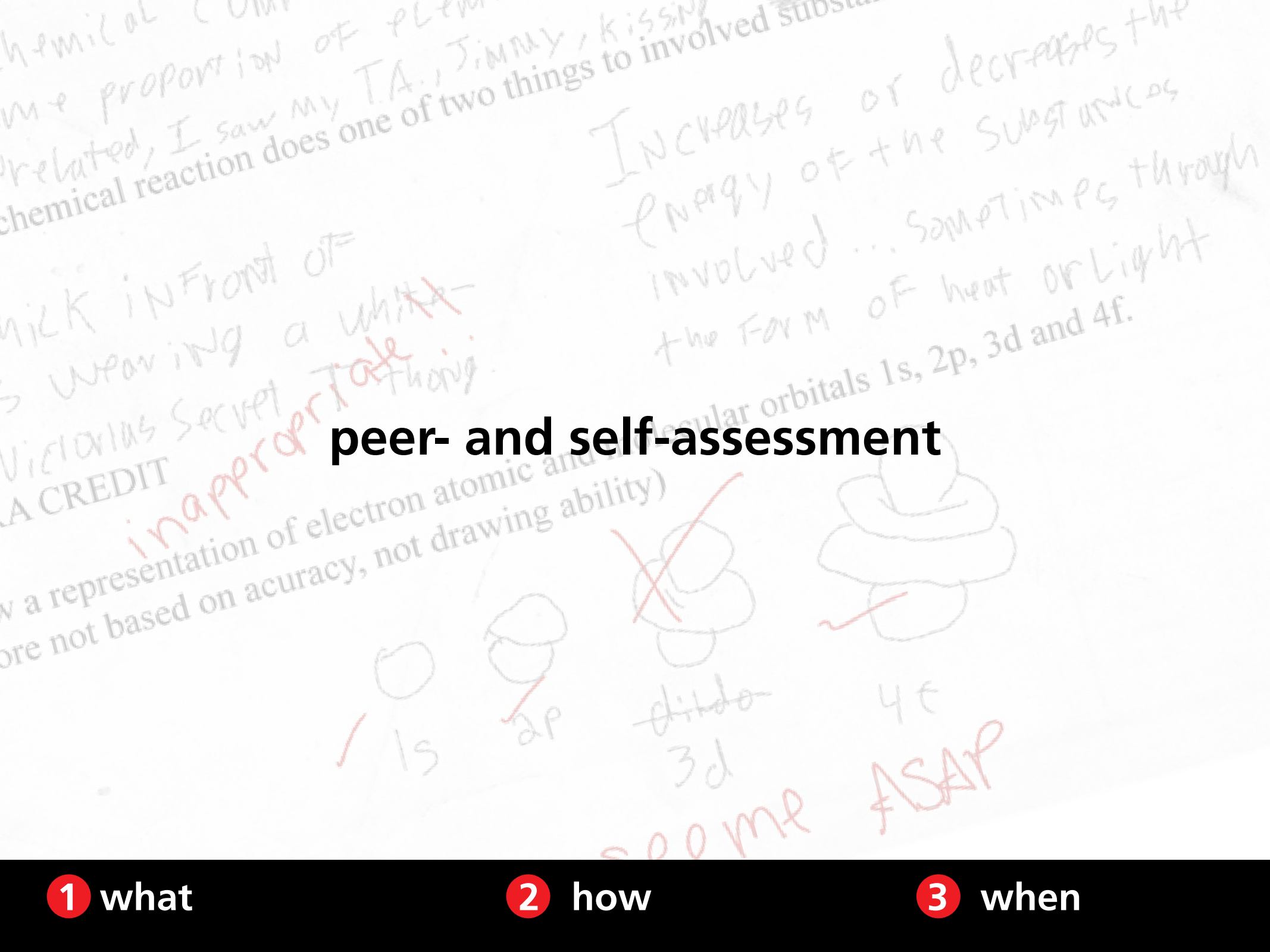
1 what 2 how 3 when

**grades:** measure of standing relative to others

**grades:** measure of standing relative to others

**feedback:** reflection on what has been learnt

1 what 2 how 3 when




1 what 2 how 3 when

# Calibrated Peer Review

cpr.molsci.ucla.edu

1 what 2 how 3 when

# Calibrated Peer Review

- upload work

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# Calibrated Peer Review

- upload work
- rubric-based scoring of 3 calibrated pieces

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# Calibrated Peer Review

- upload work
- rubric-based scoring of 3 calibrated pieces
- scoring of work by 3 peers

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1 what 2 how 3 when

# Calibrated Peer Review

- upload work
- rubric-based scoring of 3 calibrated pieces
- scoring of work by 3 peers
- scoring of own work

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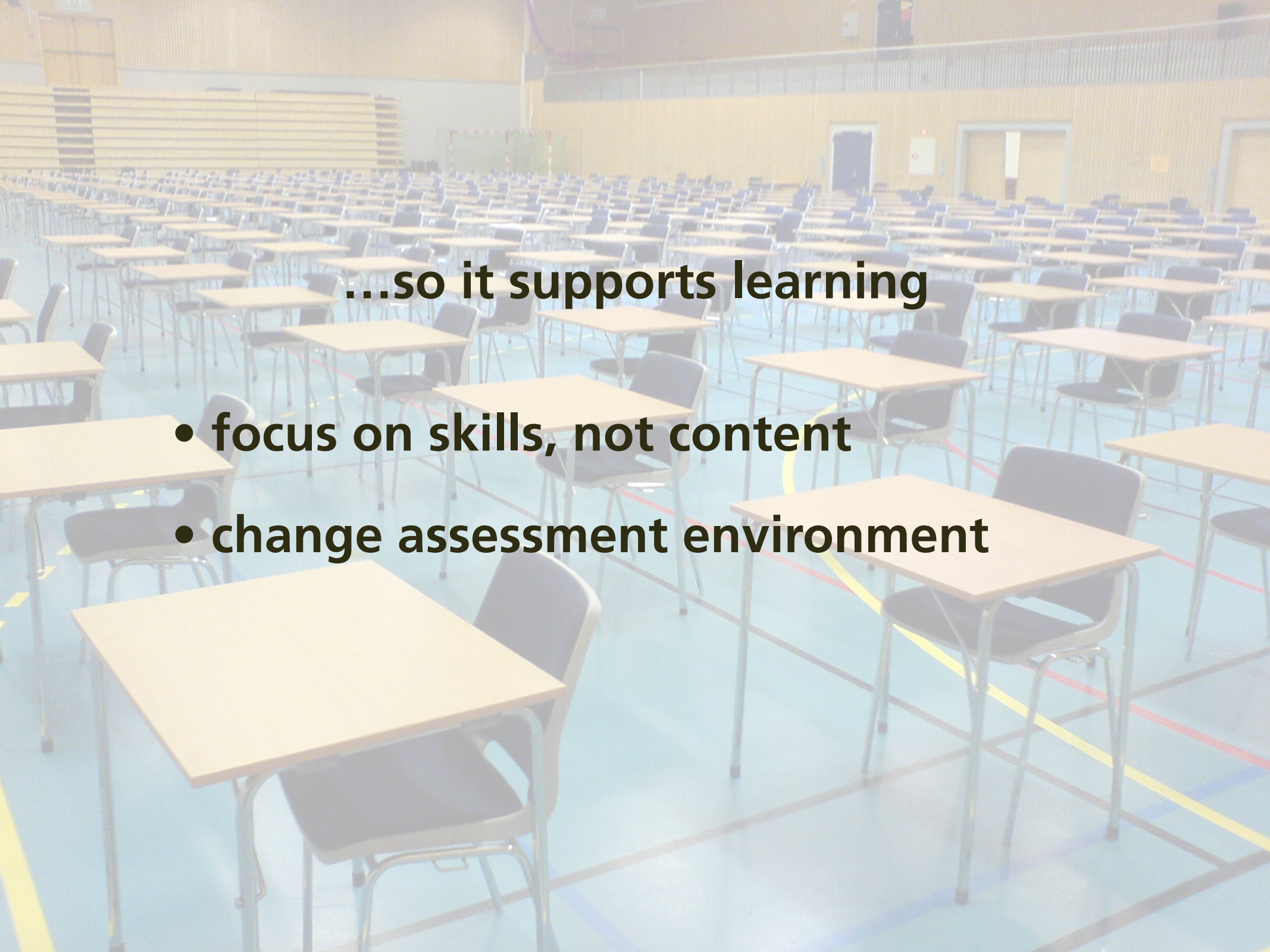
rethink
assessment


...so it supports learning

## …so it supports learning

- focus on skills, not content



## …so it supports learning

- focus on skills, not content
- change assessment environment

## …so it supports learning

- focus on skills, not content
- change assessment environment
- encourage ownership of learning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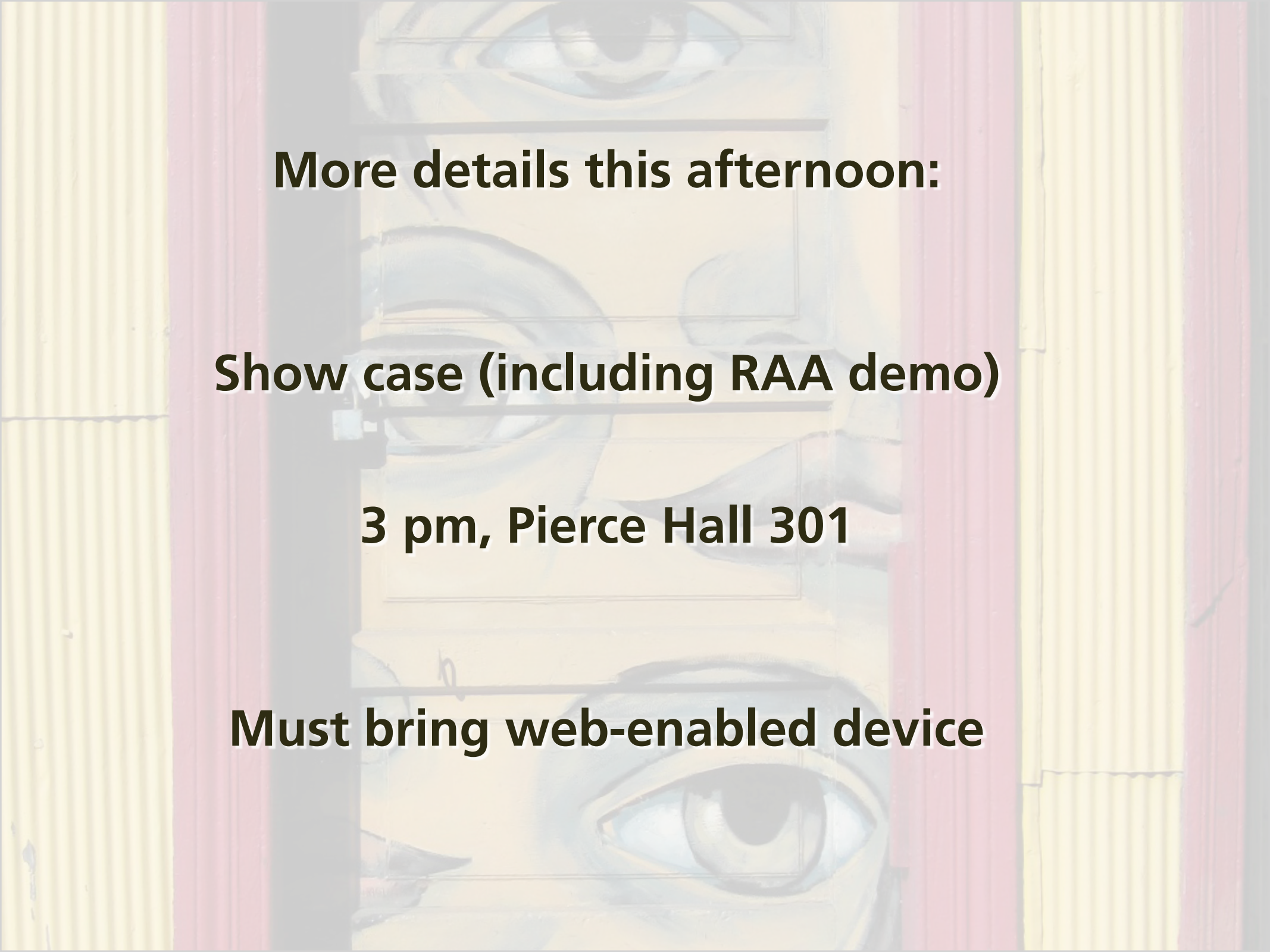

More details this afternoon:

Show case (including RAA demo)

3 pm, Pierce Hall 301

Must bring web-enabled device


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