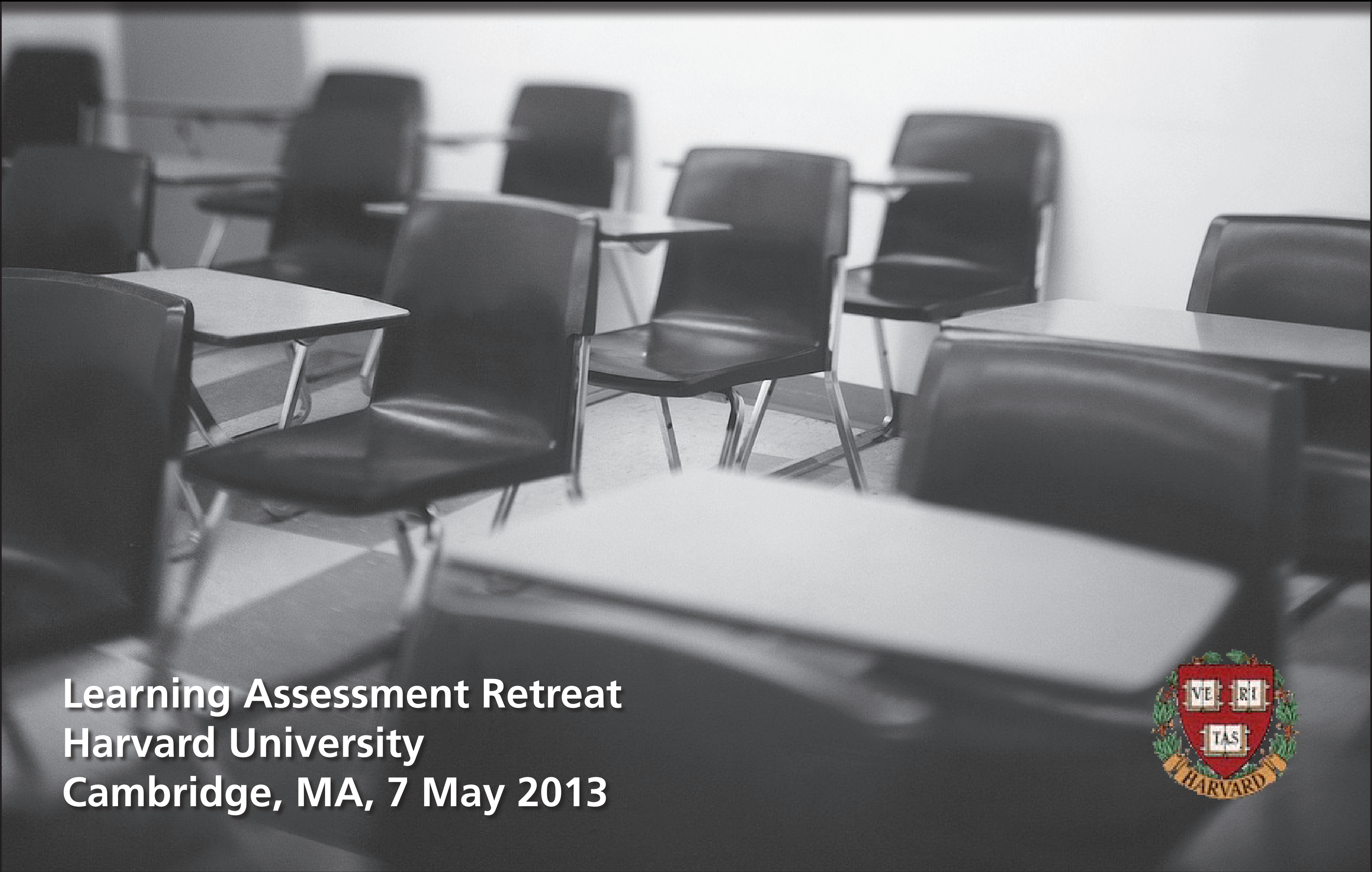
Promoting ownership of learning with authentic assessment



Learning Assessment Retreat
Harvard University
Cambridge, MA, 7 May 2013

Promoting ownership of learning with authentic assessment

@eric_mazur

Learning Assessment Retreat
Harvard University
Cambridge, MA, 7 May 2013

kosten

1. die Kosten *(pl.)*
2. kostbar
3. …lich

455

krank

1. die Krankheit, —, —en

cow

377

magnificent, splendid, glo…

1. magnifice…
2. master…

4…

der Kellner, —s, —

1. der Keller, —s, —

430

das Kind, —(e)s, —er

1. kindisch
2. kindlich

428

kennen *irreg.*

kannte-gekannt

1. kennen-lernen
2. erkennen
3. bekannt
4. der Bekannte *(adj. as n.)*

south…

verba…

…07

accel.
poco rit.
…ink o…
…vet!

kosten
1. die Kosten (pl.)
2. kostbar
krank
die Krankheit, —, —en
455
377
428
kennen
kannte-gekannt
1. kennen-lernen
2. erkennen
3. bekannt
4. der Bekannte (adj. as n.)
Verizon 3G
4:20 PM
Flashcard
Back
23 of 100
pedantic
adj. ostentatious in one's learning
Search
Popular
Subjects
Grade Levels
Standardized
Home
My Decks
Browse
More

kosten
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2. kostbar
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kennen
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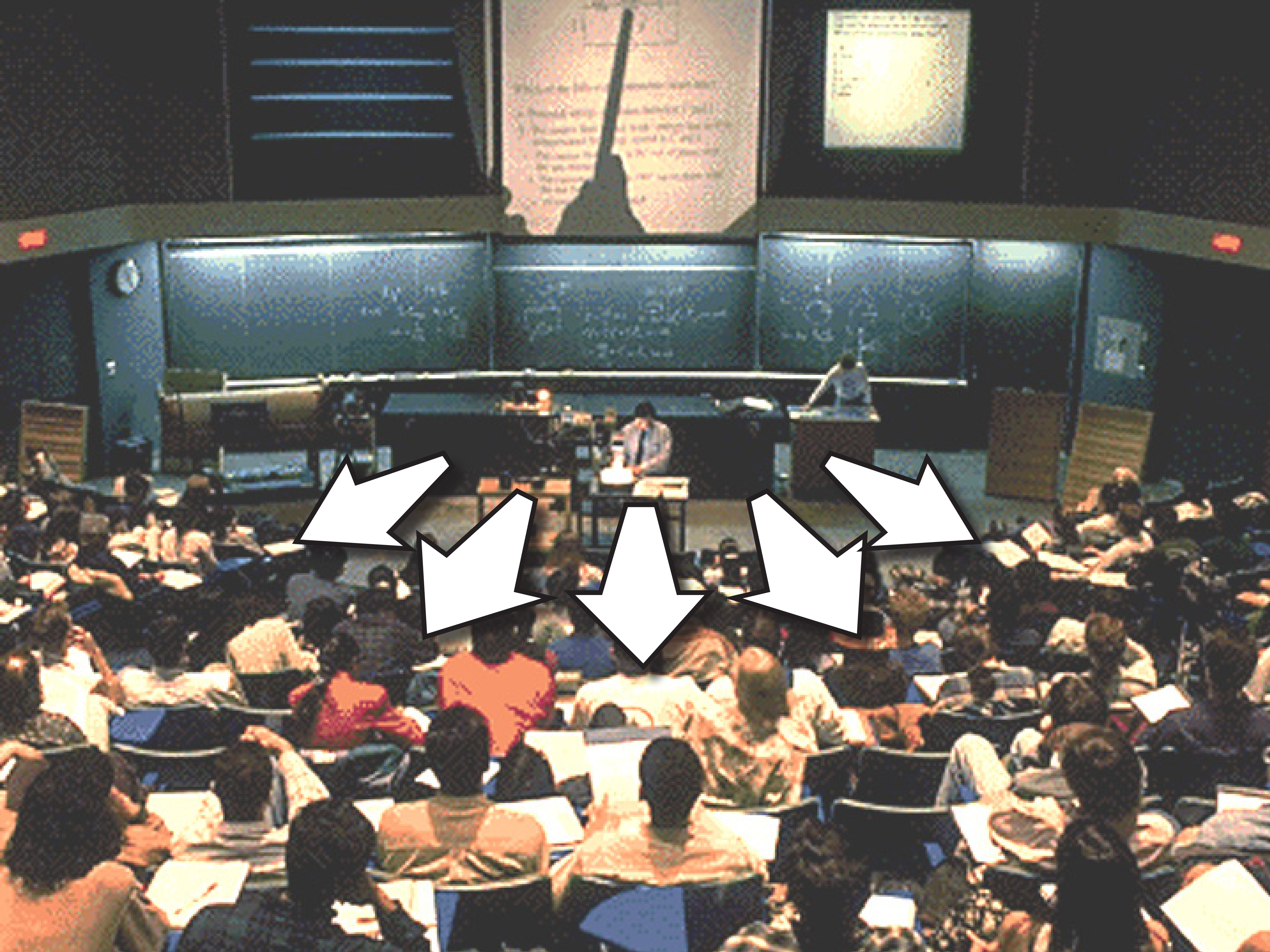
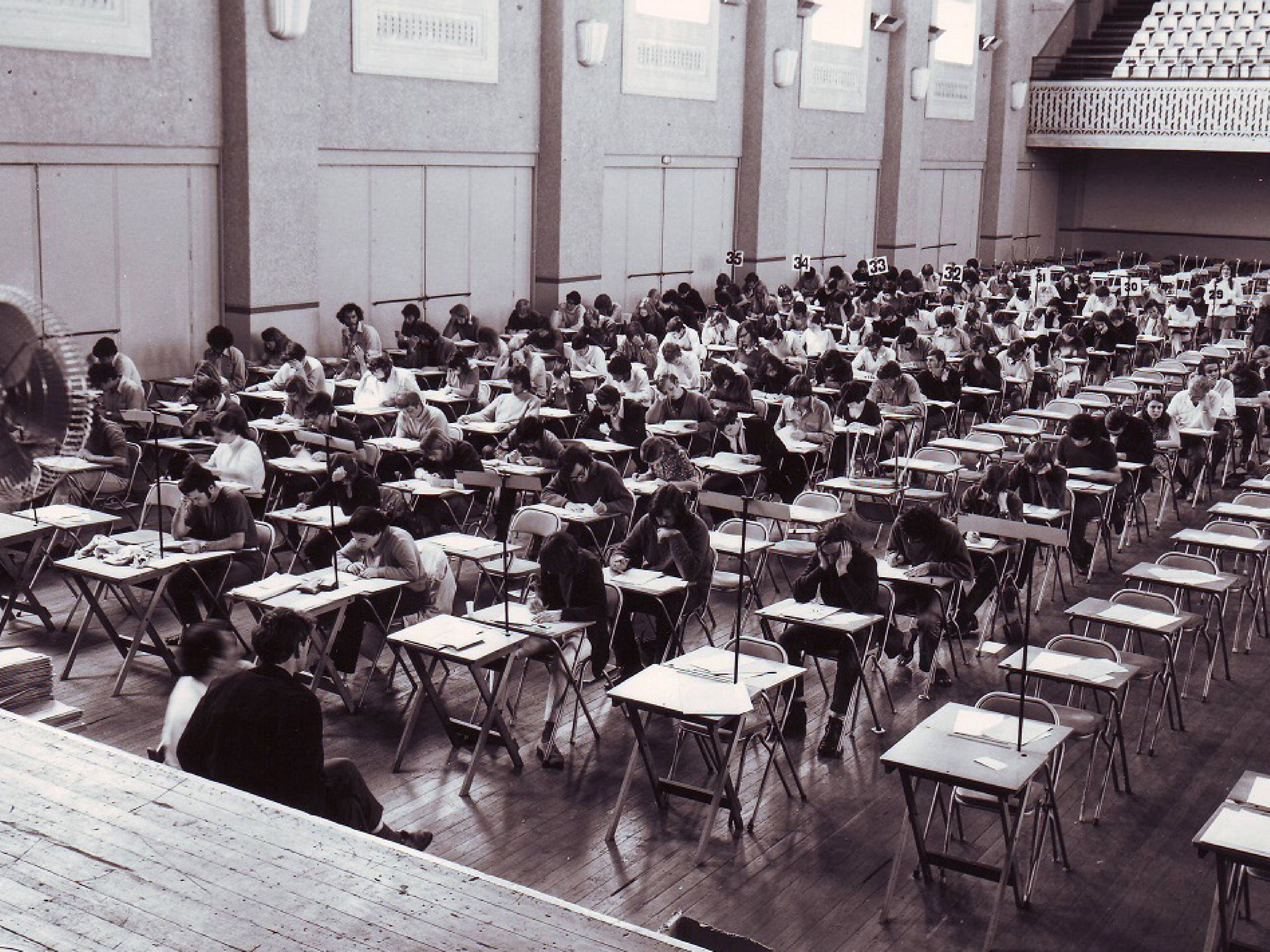
4. der Bekannte (adj. as n.)
Flashcard
pedantic
adj. ostentatious in one's learning
23 of 100
Popular
Grade Levels
Standardized

35% retained after 1 week

we only guarantee
they’ll pass the test

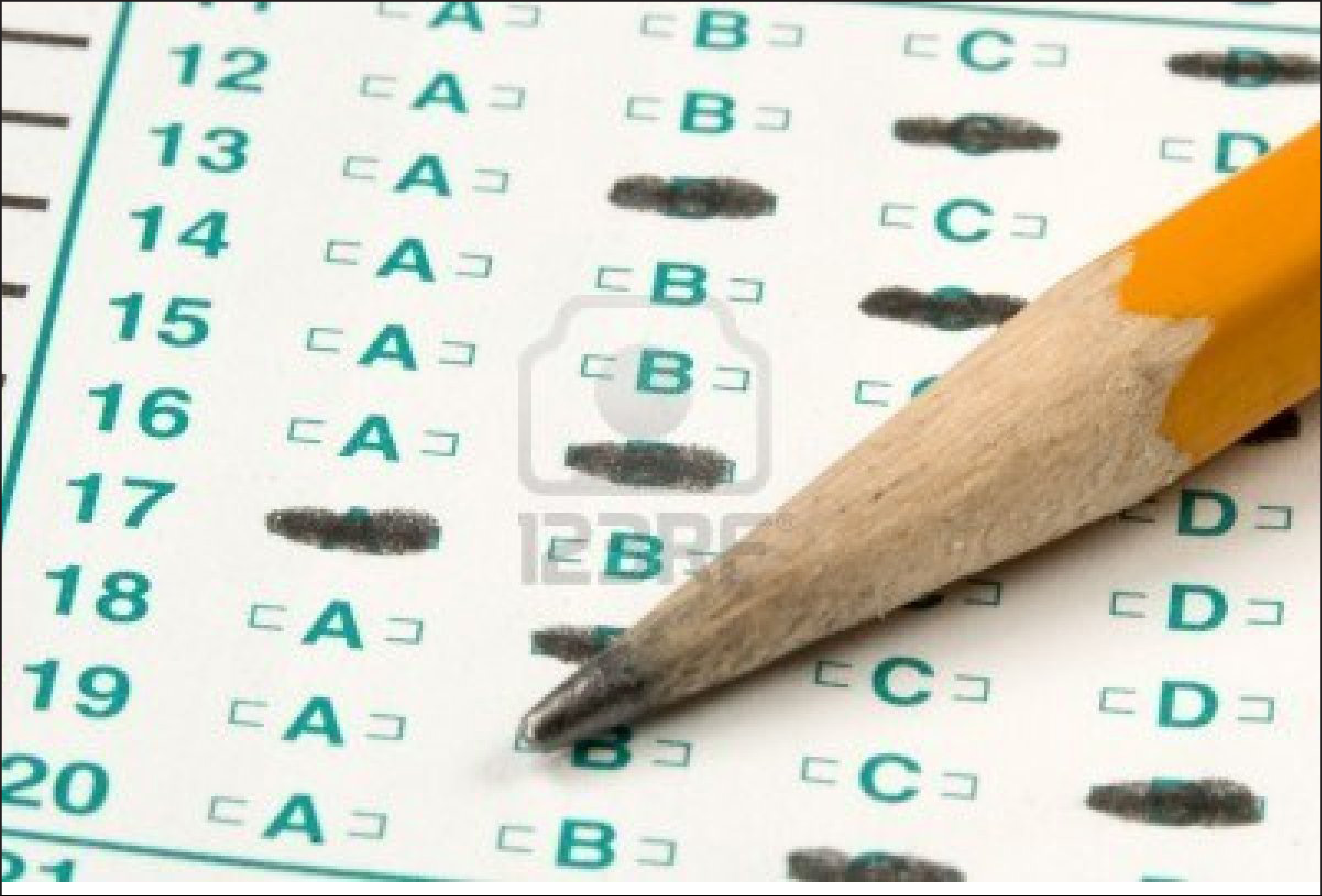
5-minute university



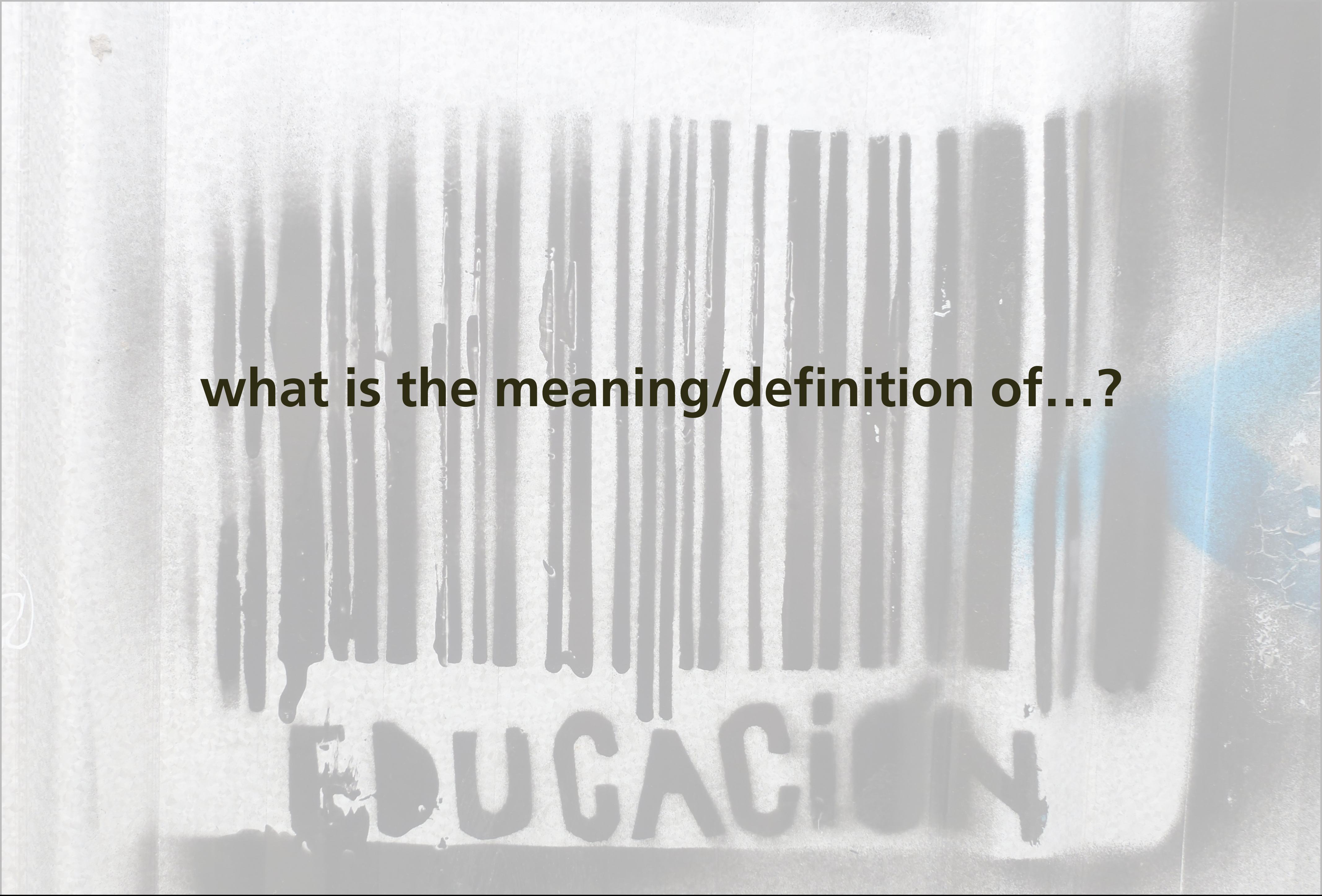

35
34
33
32
31
30
29

assessment focussed on ranking and classifying,

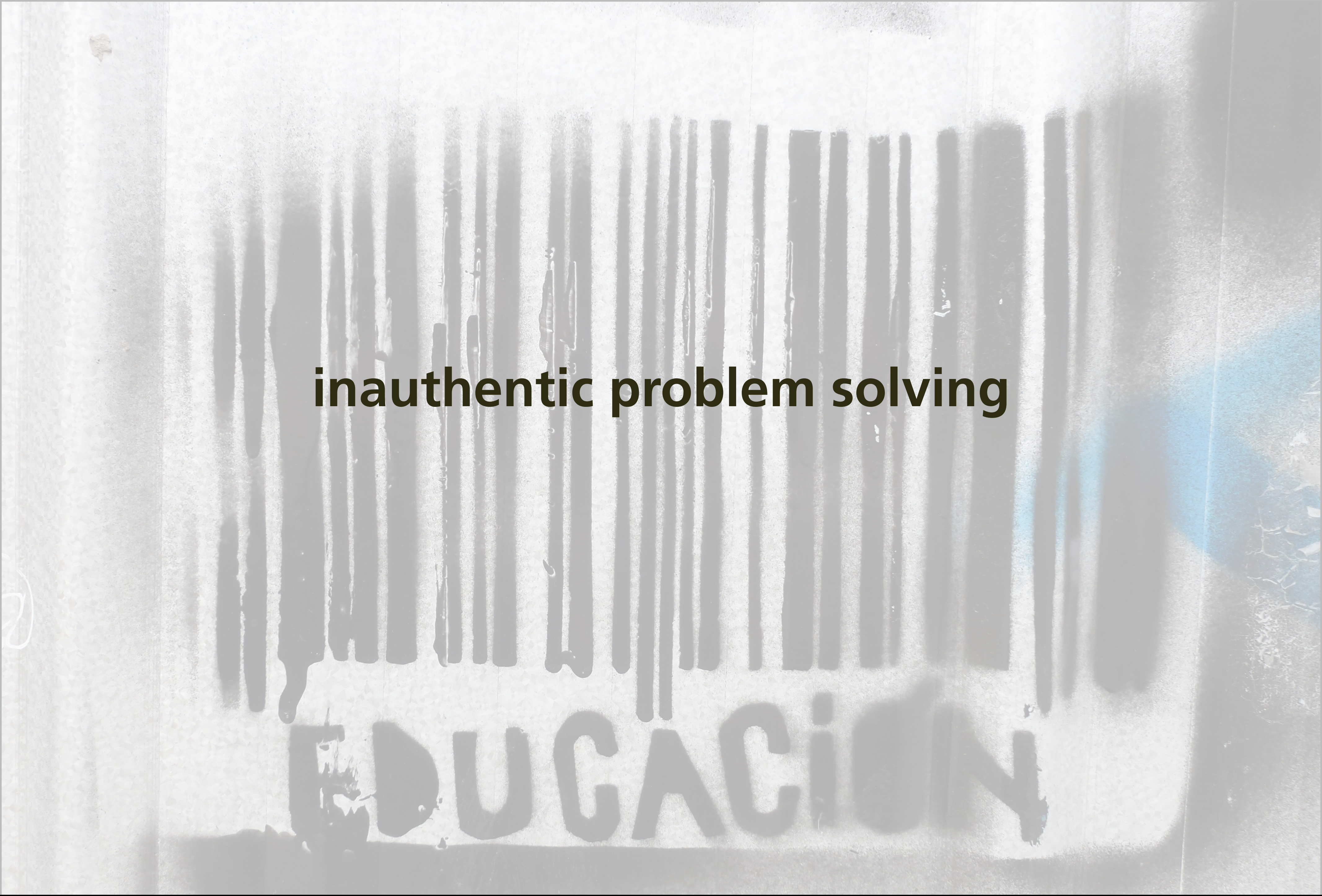
not on developing 21st century skills



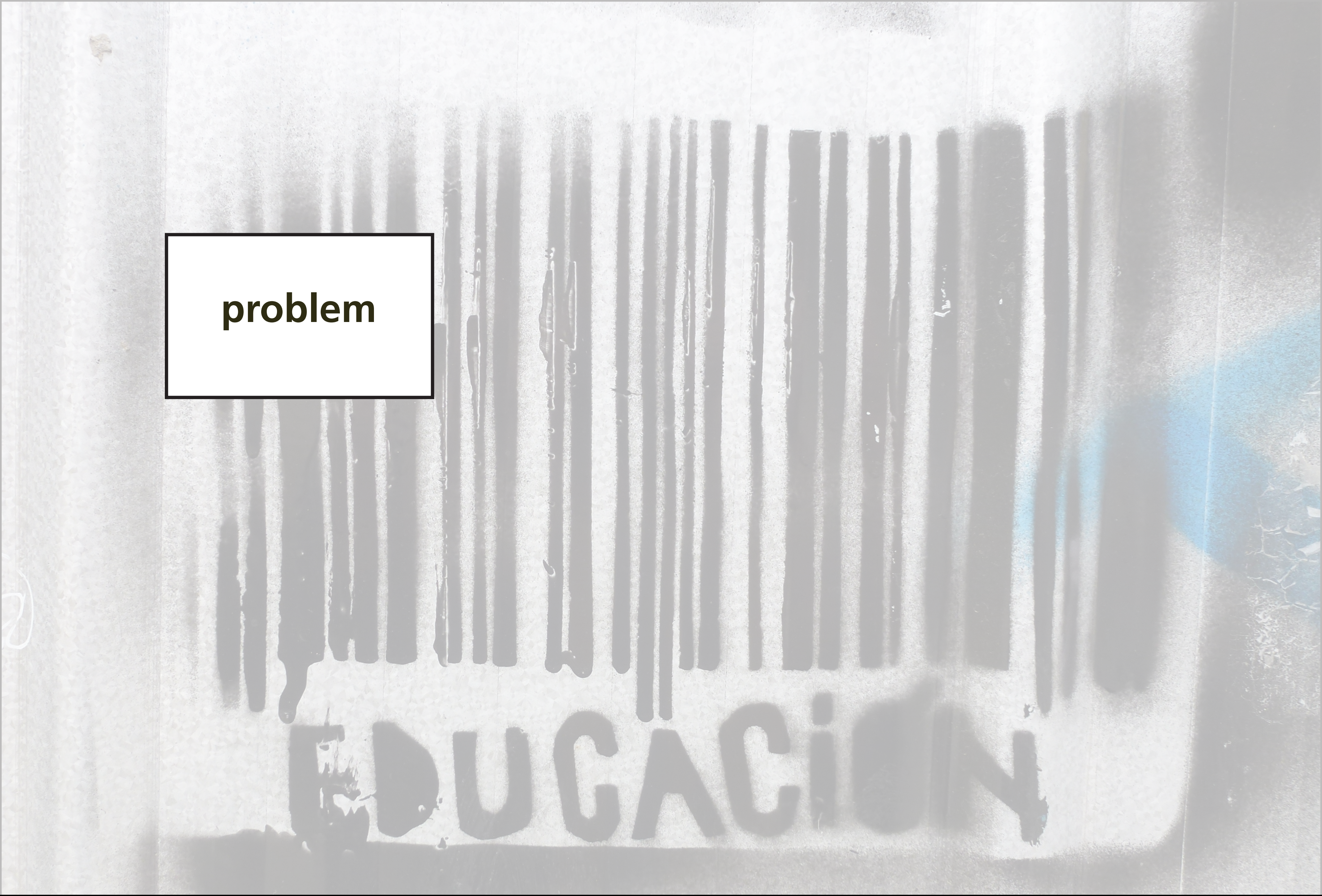
① what ② how ③ when



what is the meaning/definition of...?

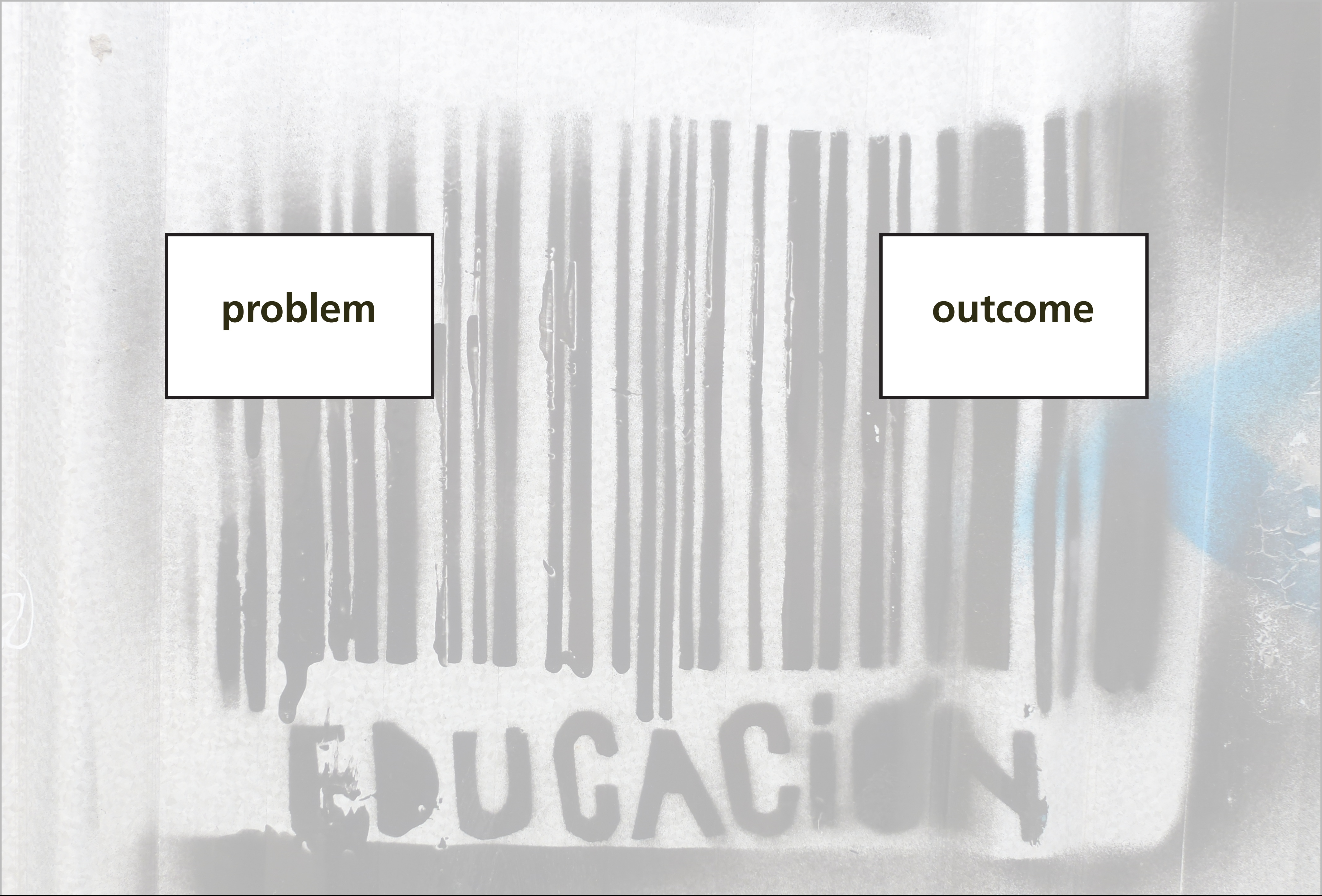


inauthentic problem solving



problem

① what



problem

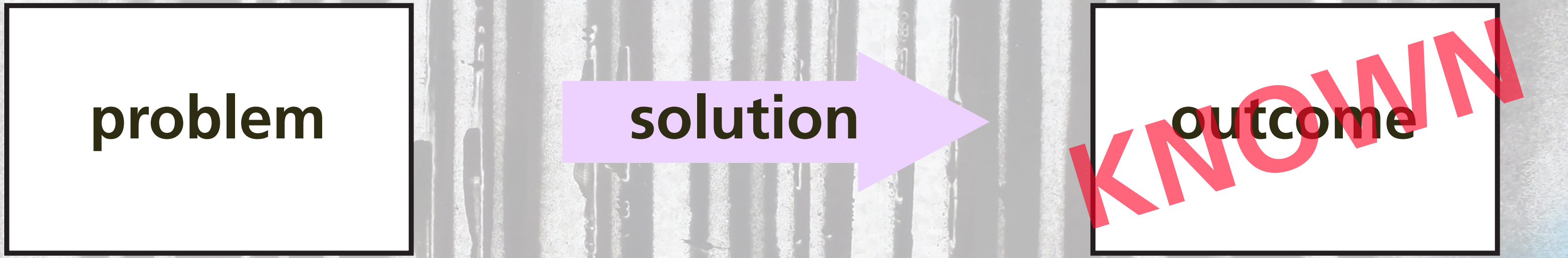
outcome

problem

outcome

KNOWN

① what



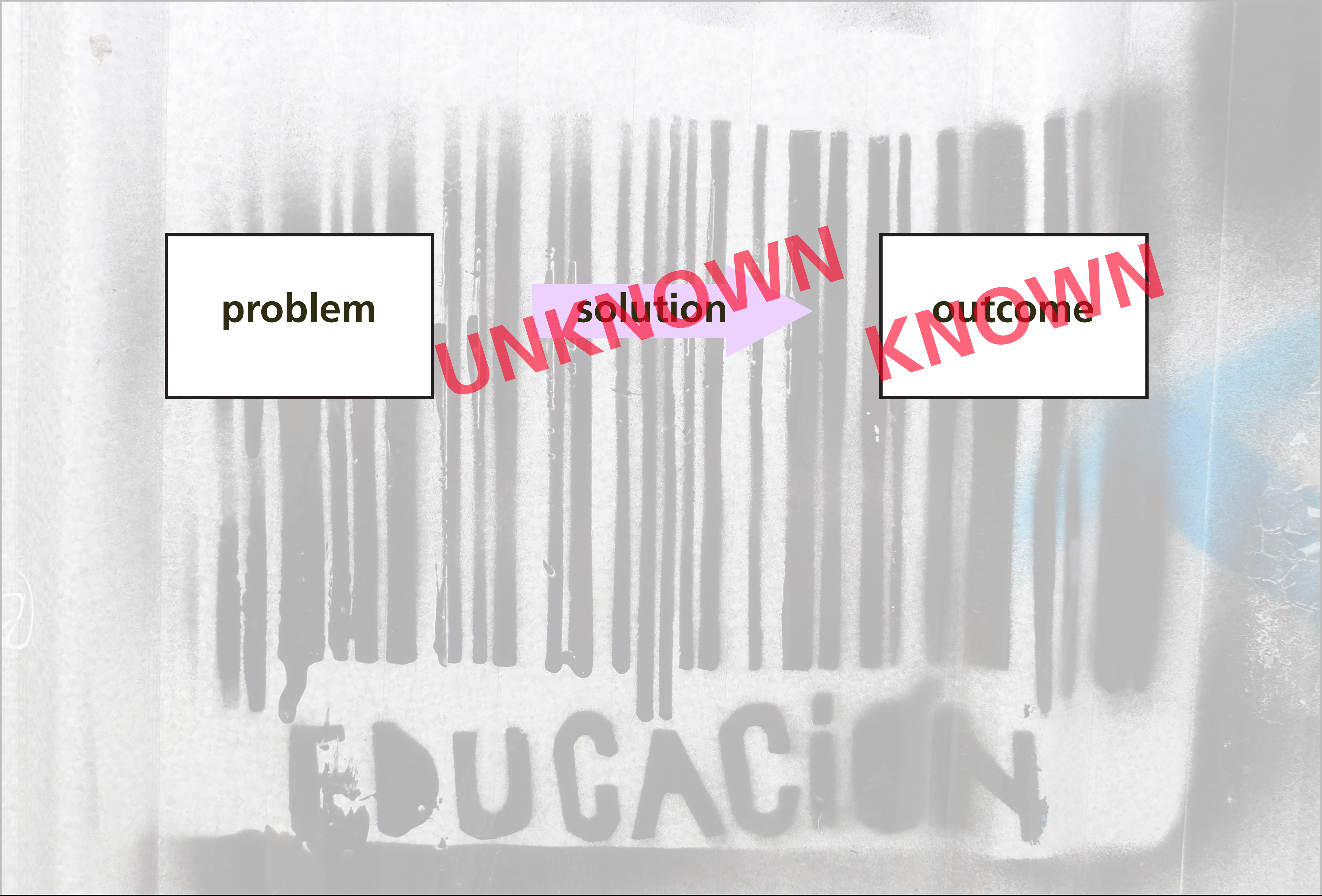
problem

solution

outcome

KNOWN

1 what



problem

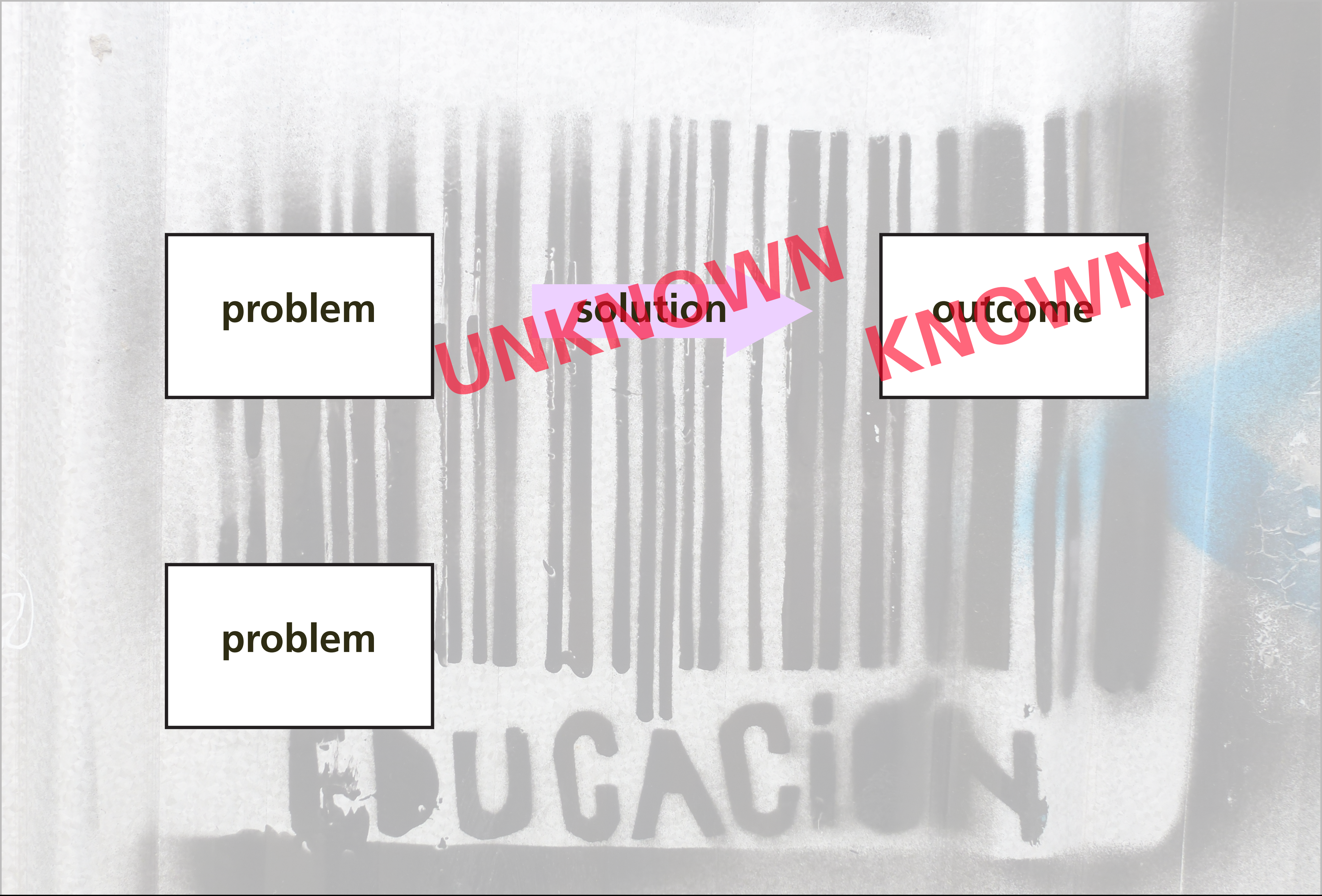
solution

UNKNOWN

outcome

KNOWN

1 what



problem

solution

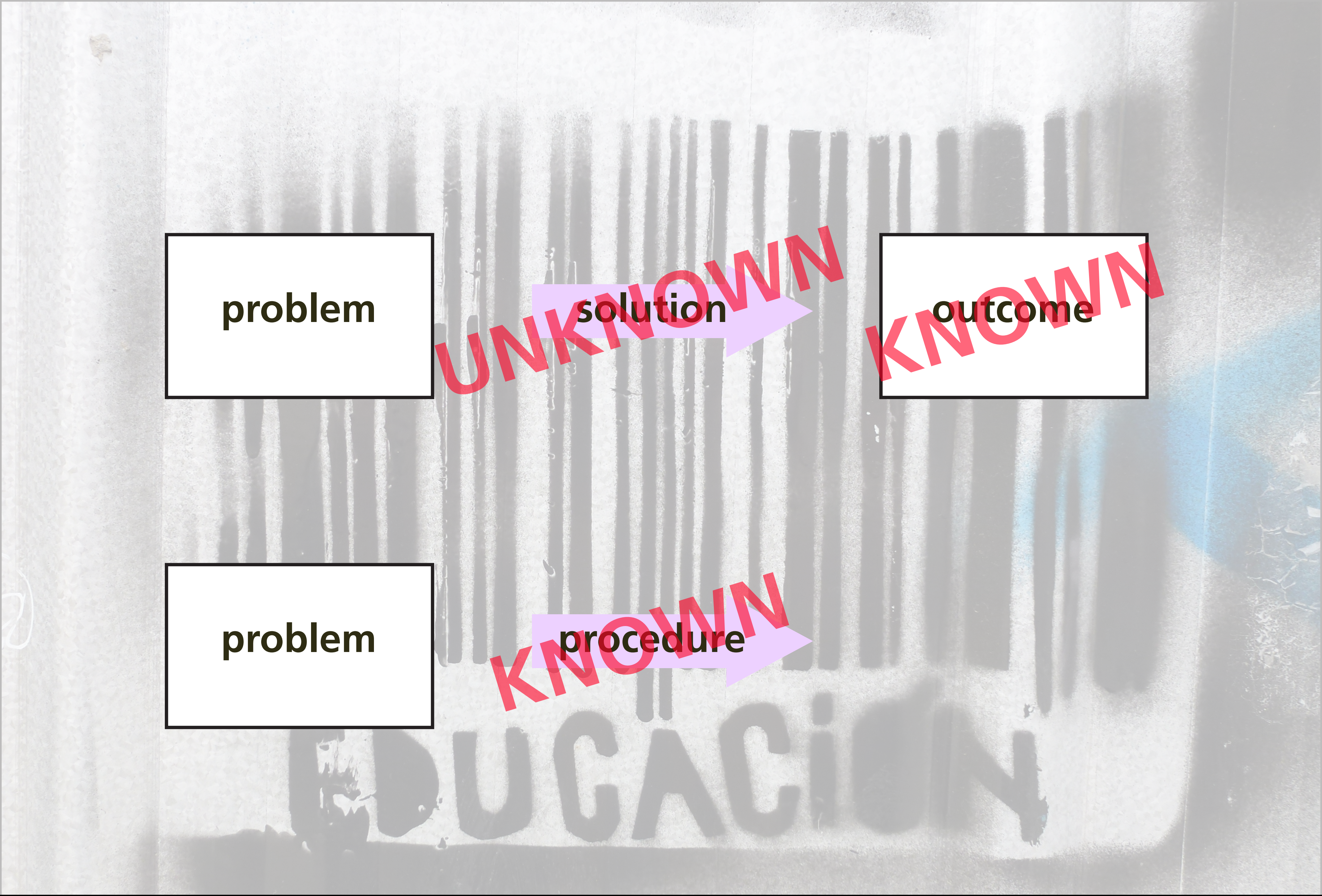
UNKNOWN

outcome

KNOWN

problem

1 what



problem

solution

UNKNOWN

outcome

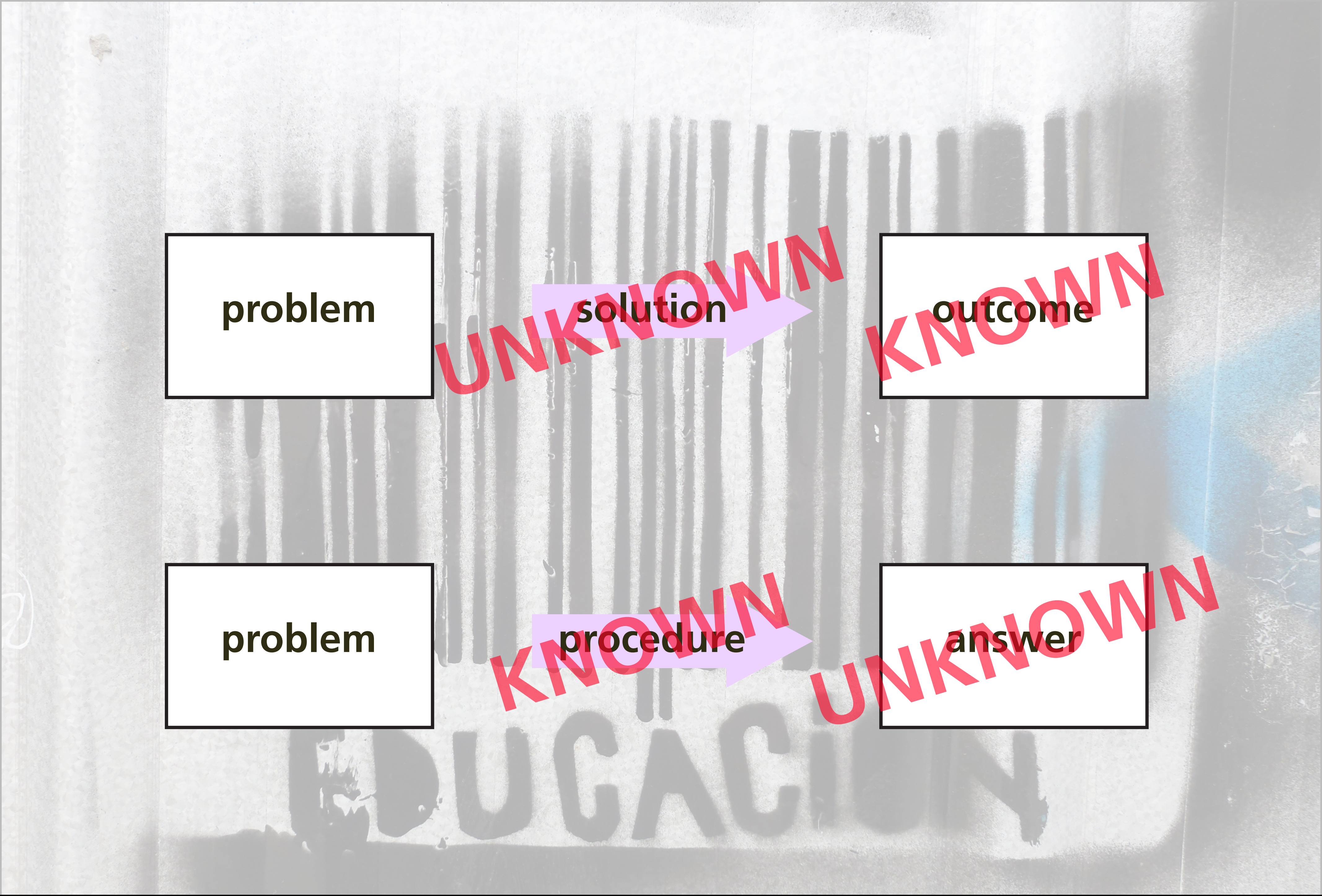
KNOWN

problem

procedure

KNOWN

1 what



problem

UNKNOWN

solution

KNOWN

outcome

problem

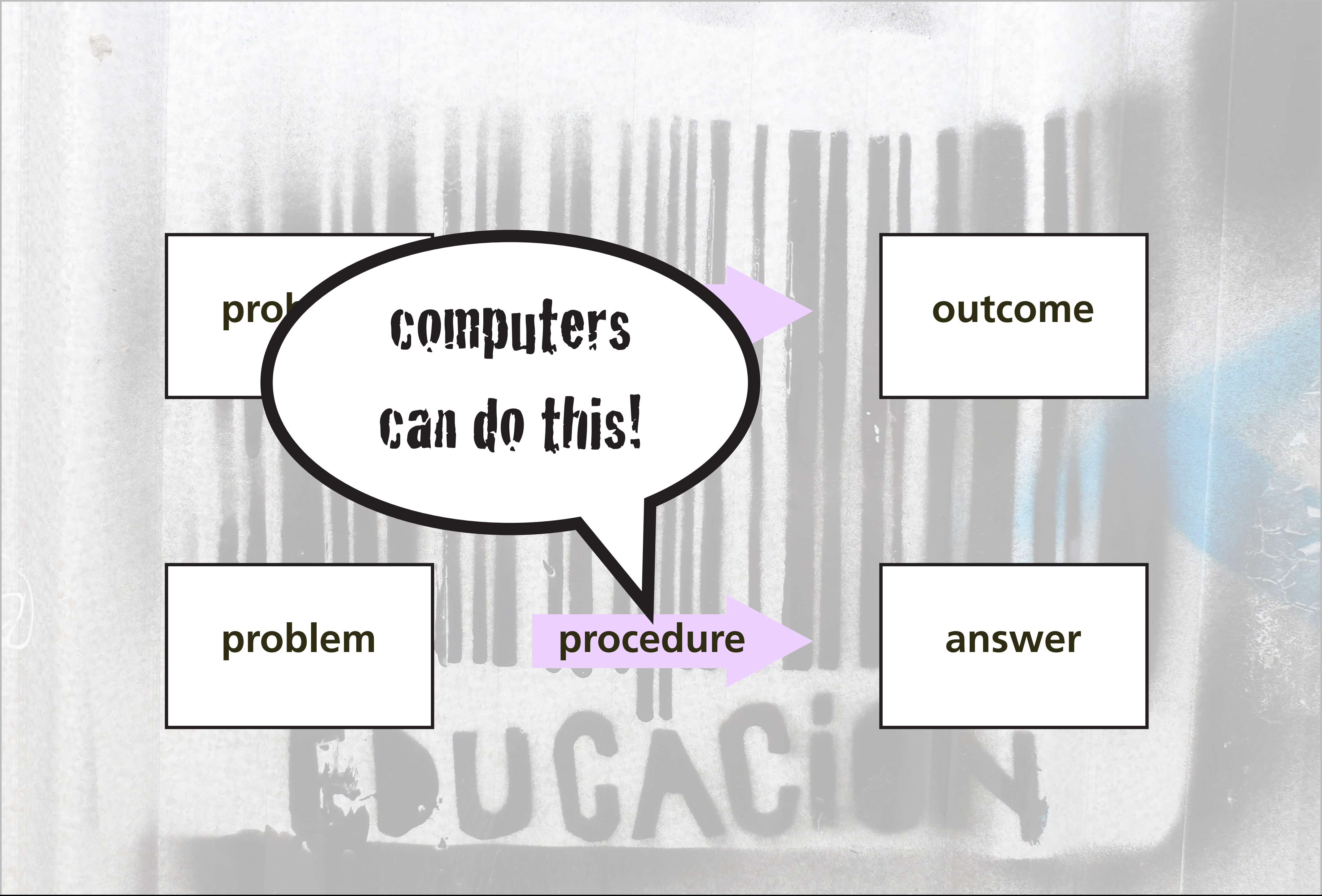
KNOWN

procedure

UNKNOWN

answer

① what



prob

outcome

computers can do this!

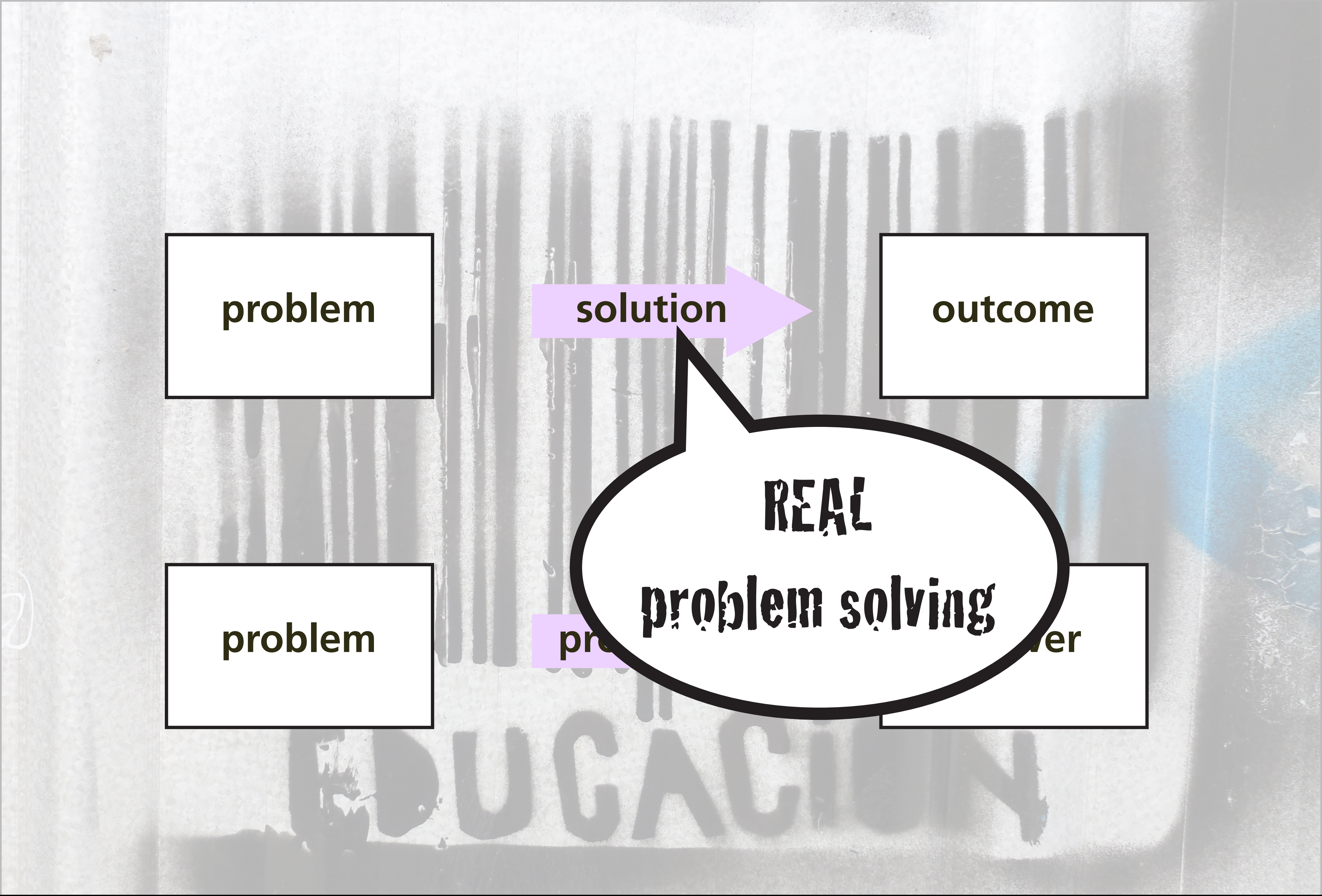
problem

procedure

answer

1 what

① what



problem

solution

outcome

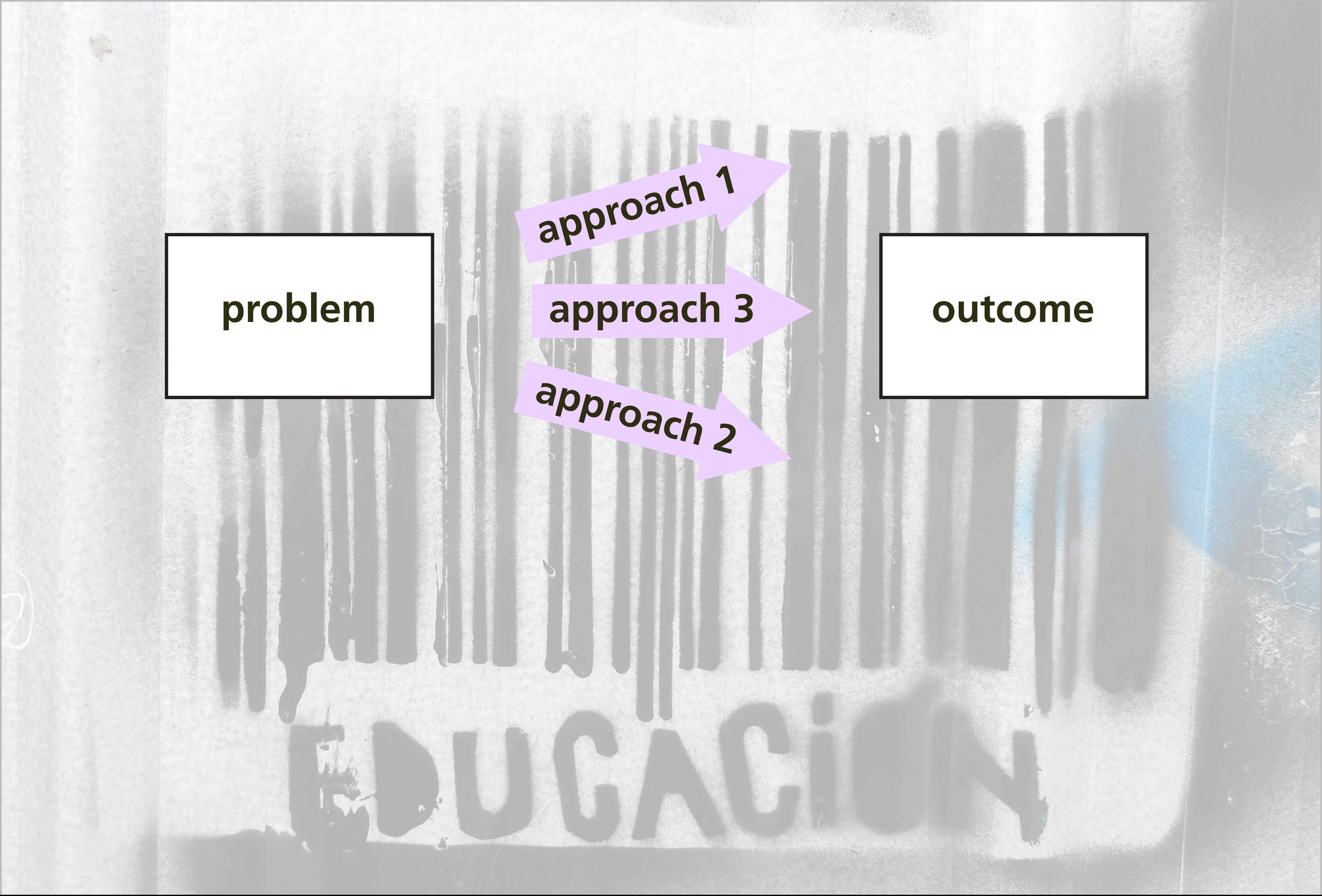
problem

pr

ver

REAL

problem solving



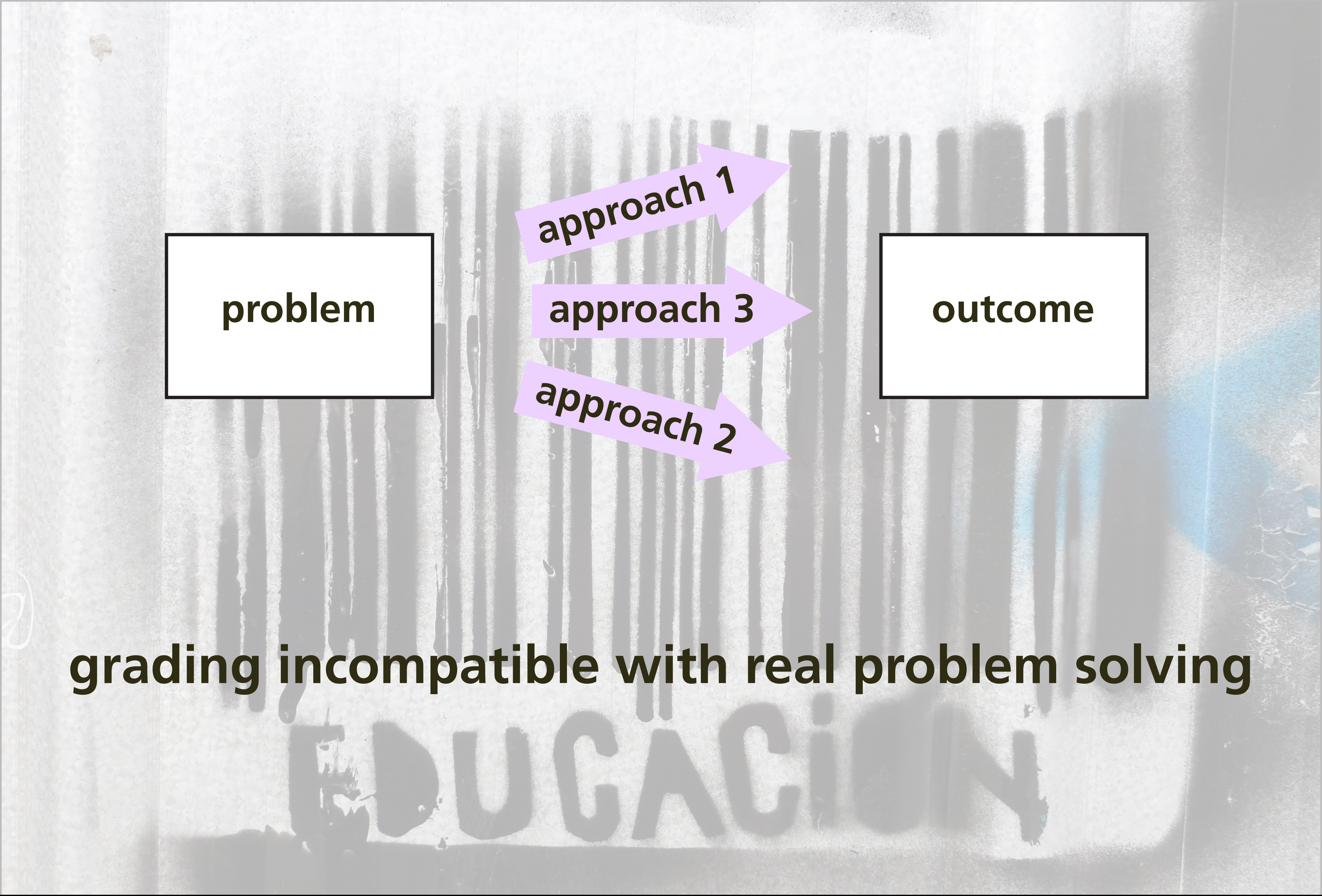
problem

approach 1

approach 3

approach 2

outcome



problem

approach 1

approach 3

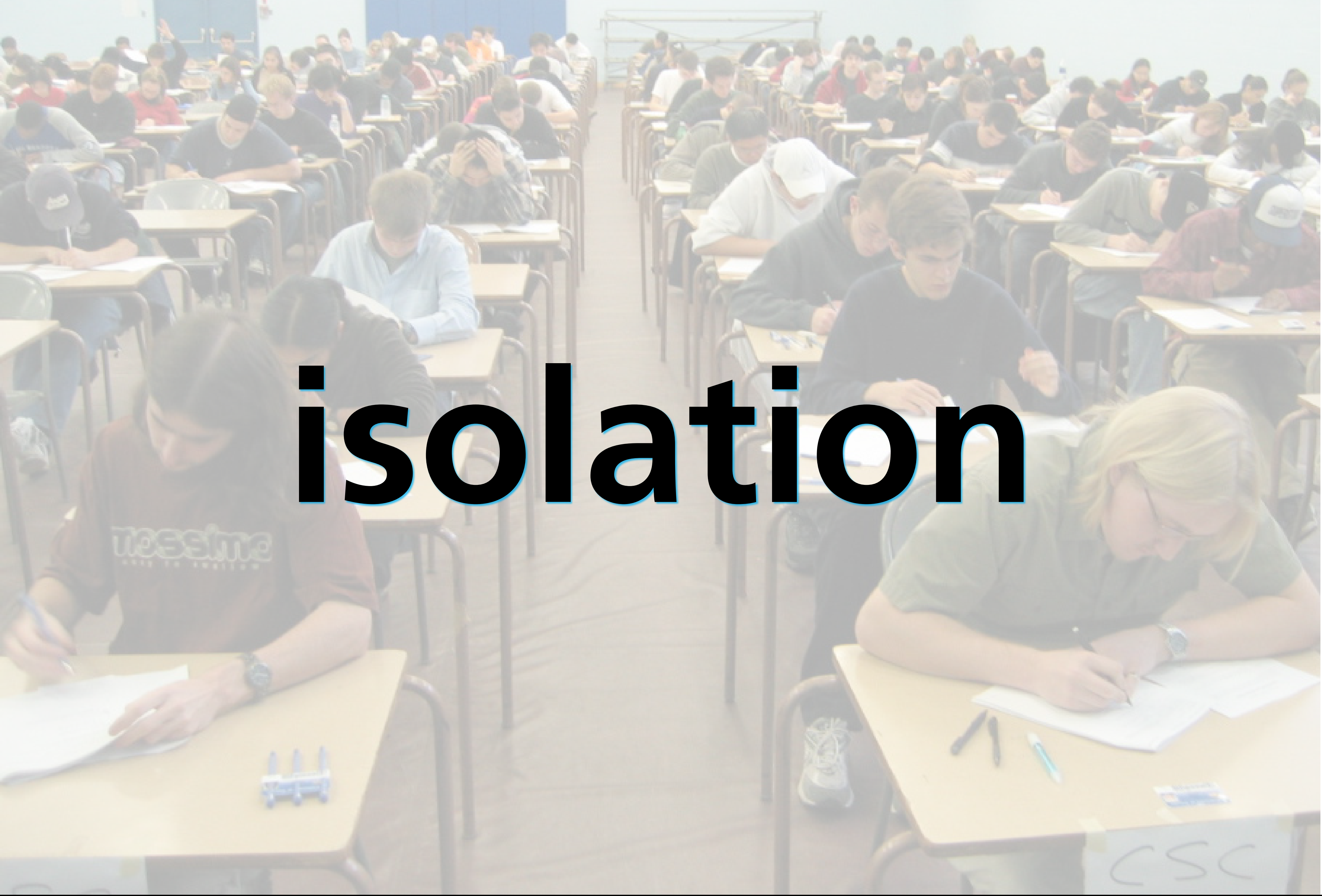
approach 2

outcome

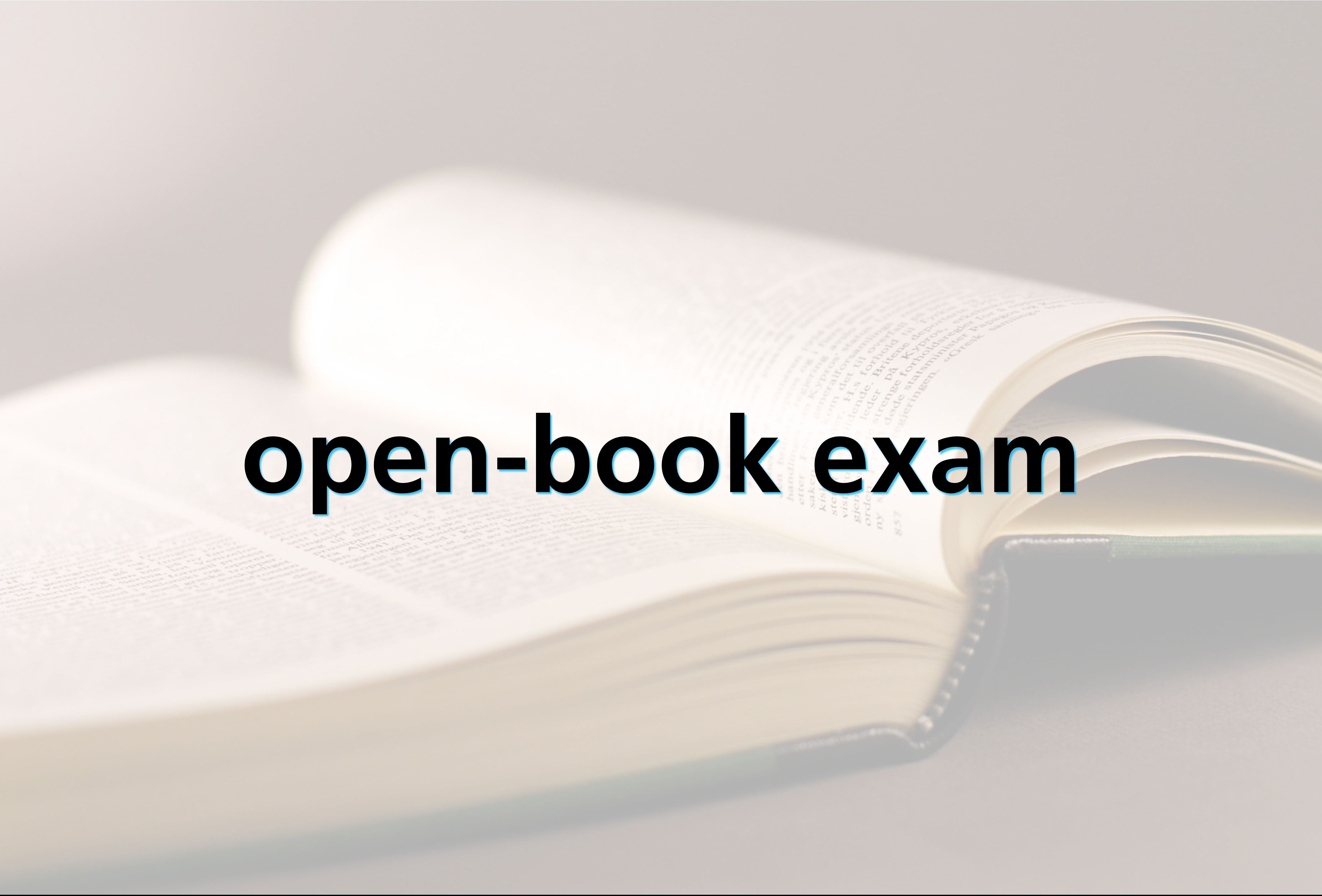
grading incompatible with real problem solving

① **what**

② **how**



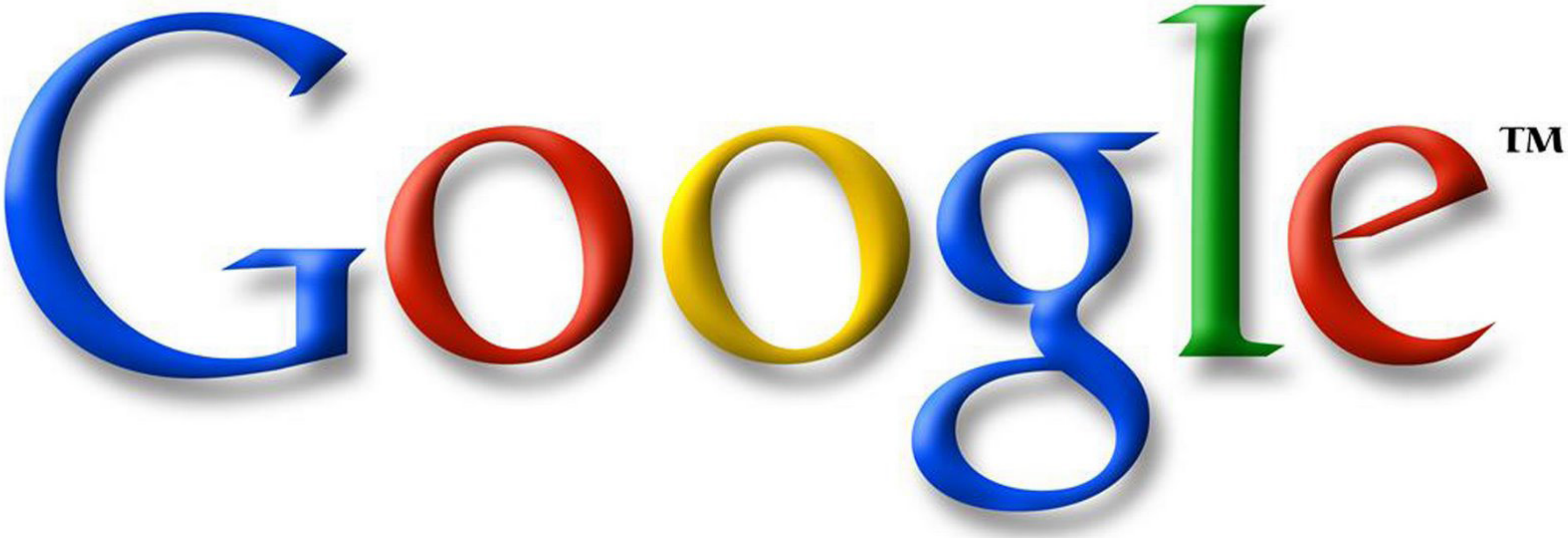
isolation



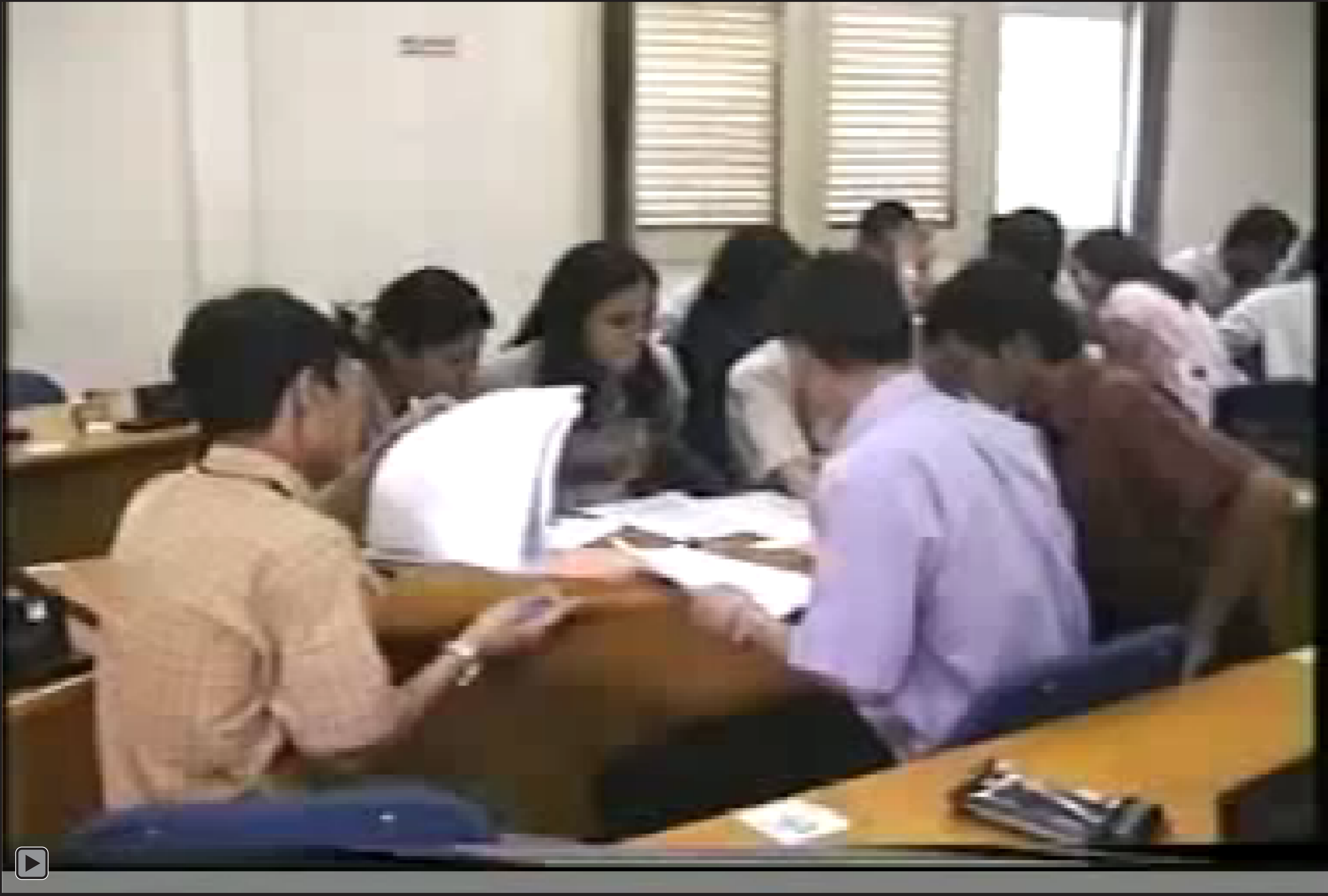
open-book exam

① what

② how

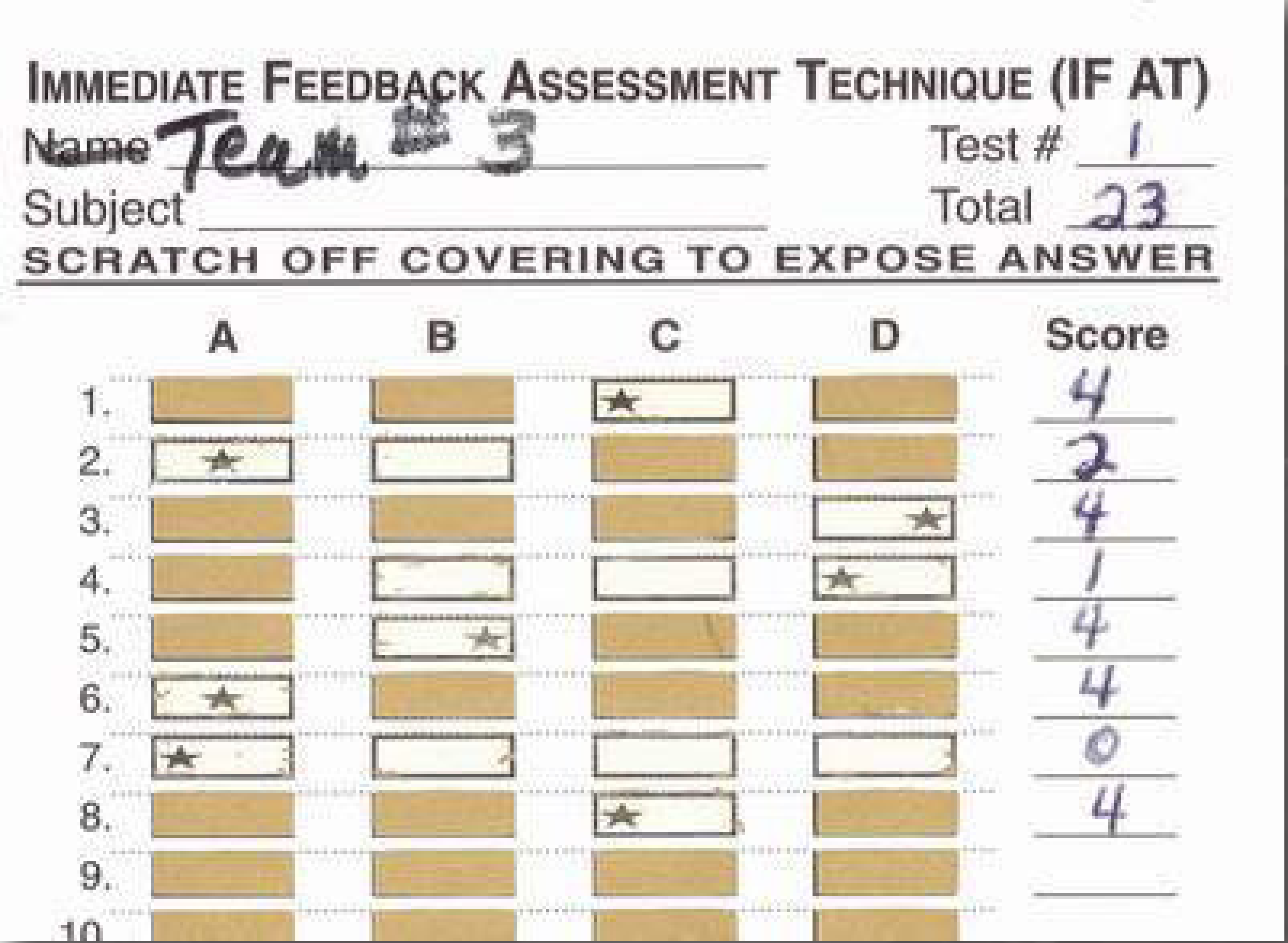


① **what** ② **how**



❶ what

❷ 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.	▨	▨	▨	▨	

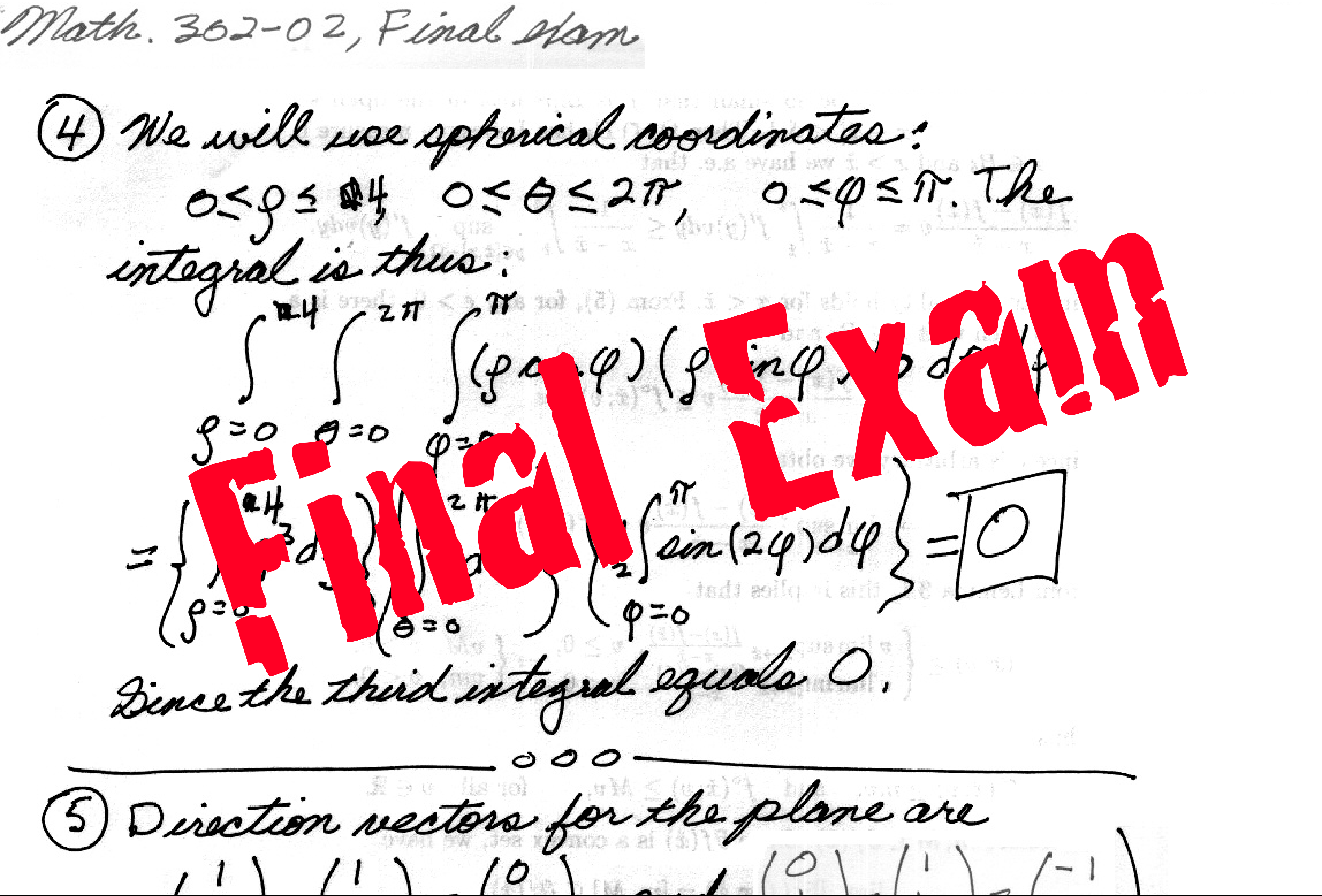
① what

② how

learning catalytics

① what

② how



Math. 302-02, Final Exam

④ We will use spherical coordinates:

$0 \le \rho \le 4$, $0 \le \theta \le 2\pi$, $0 \le \varphi \le \pi$. The integral is thus:

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

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

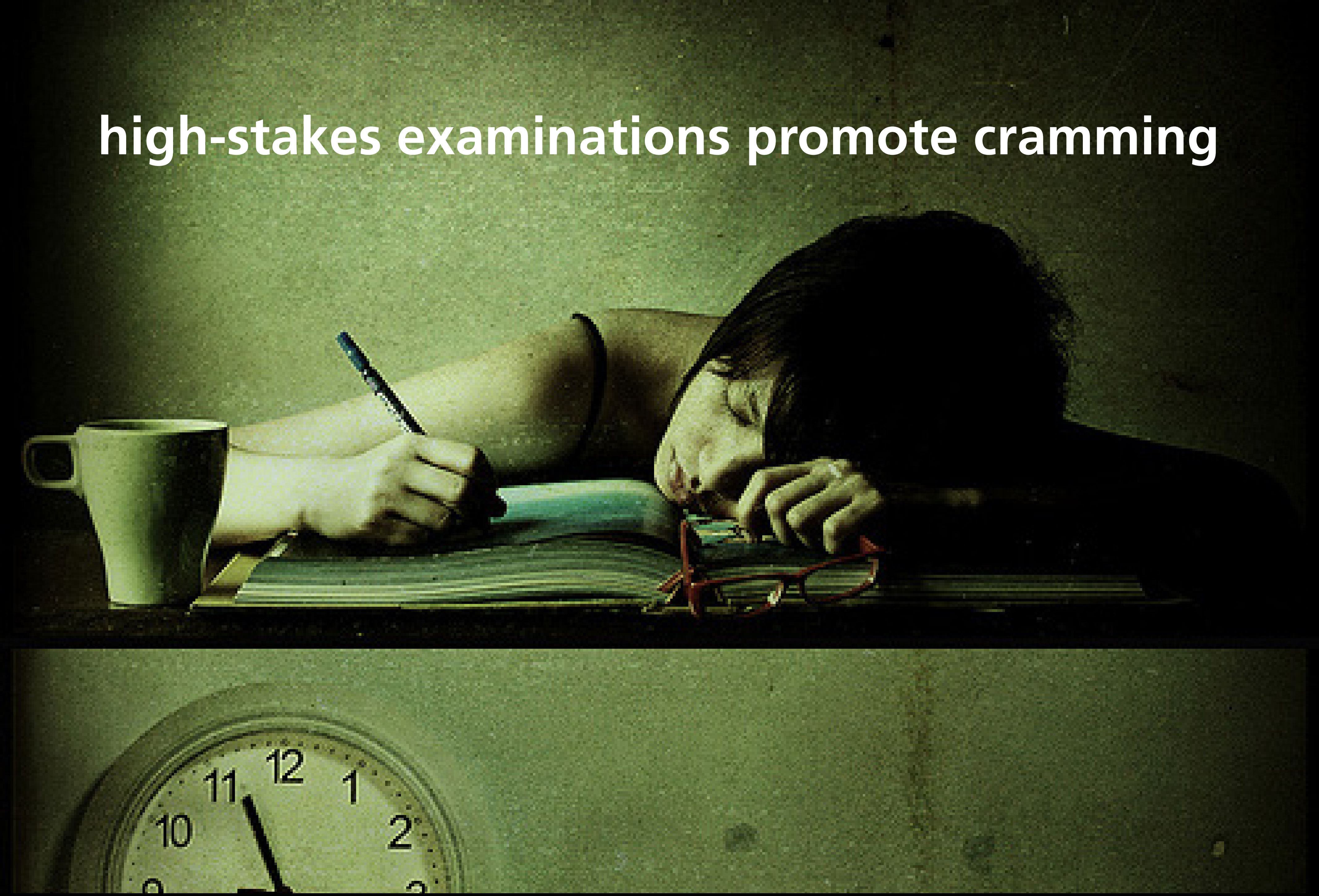
Since the third integral equals 0.

ooo

⑤ Direction vectors for the plane are

1 what **2** how **3** when

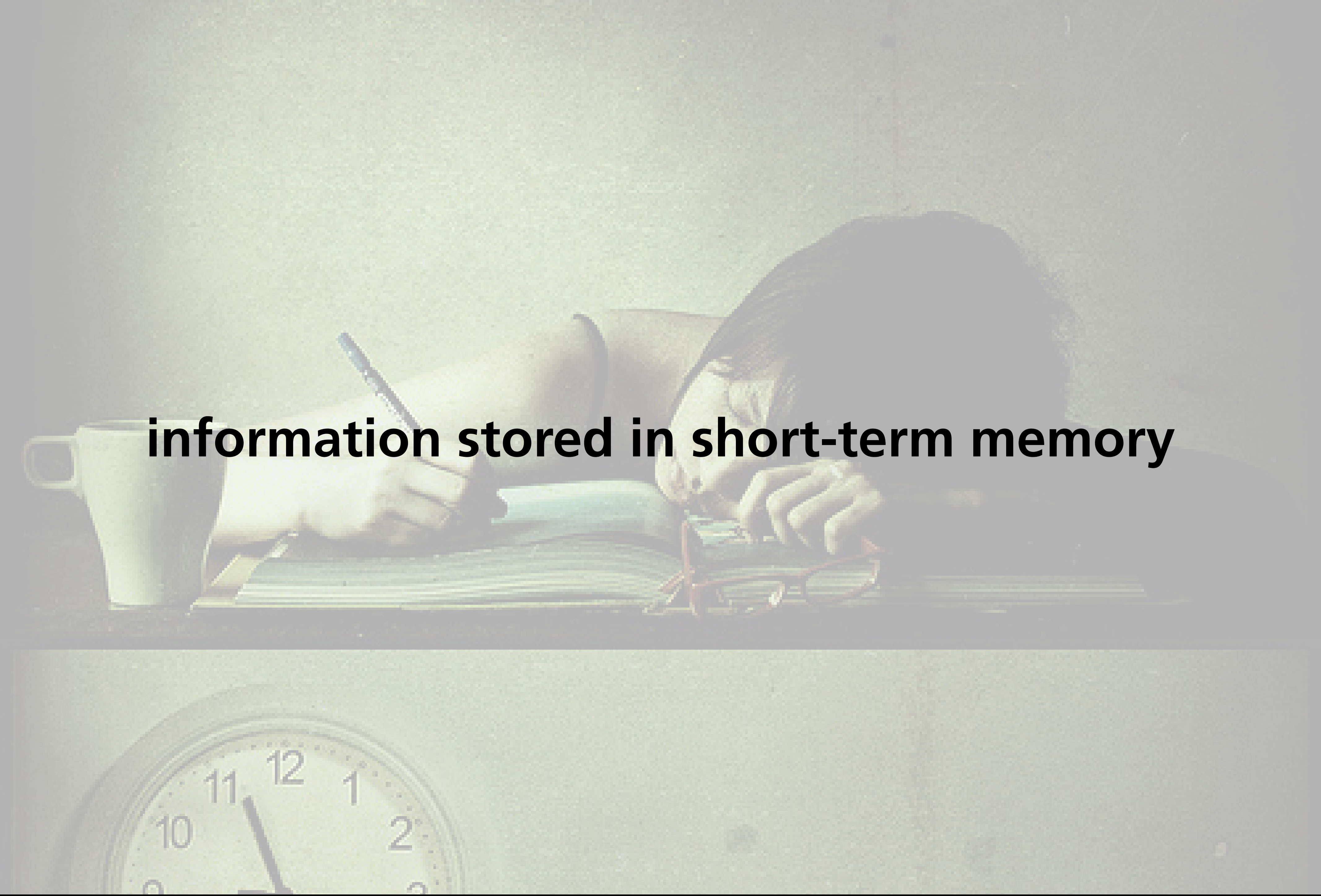
high-stakes examinations promote cramming



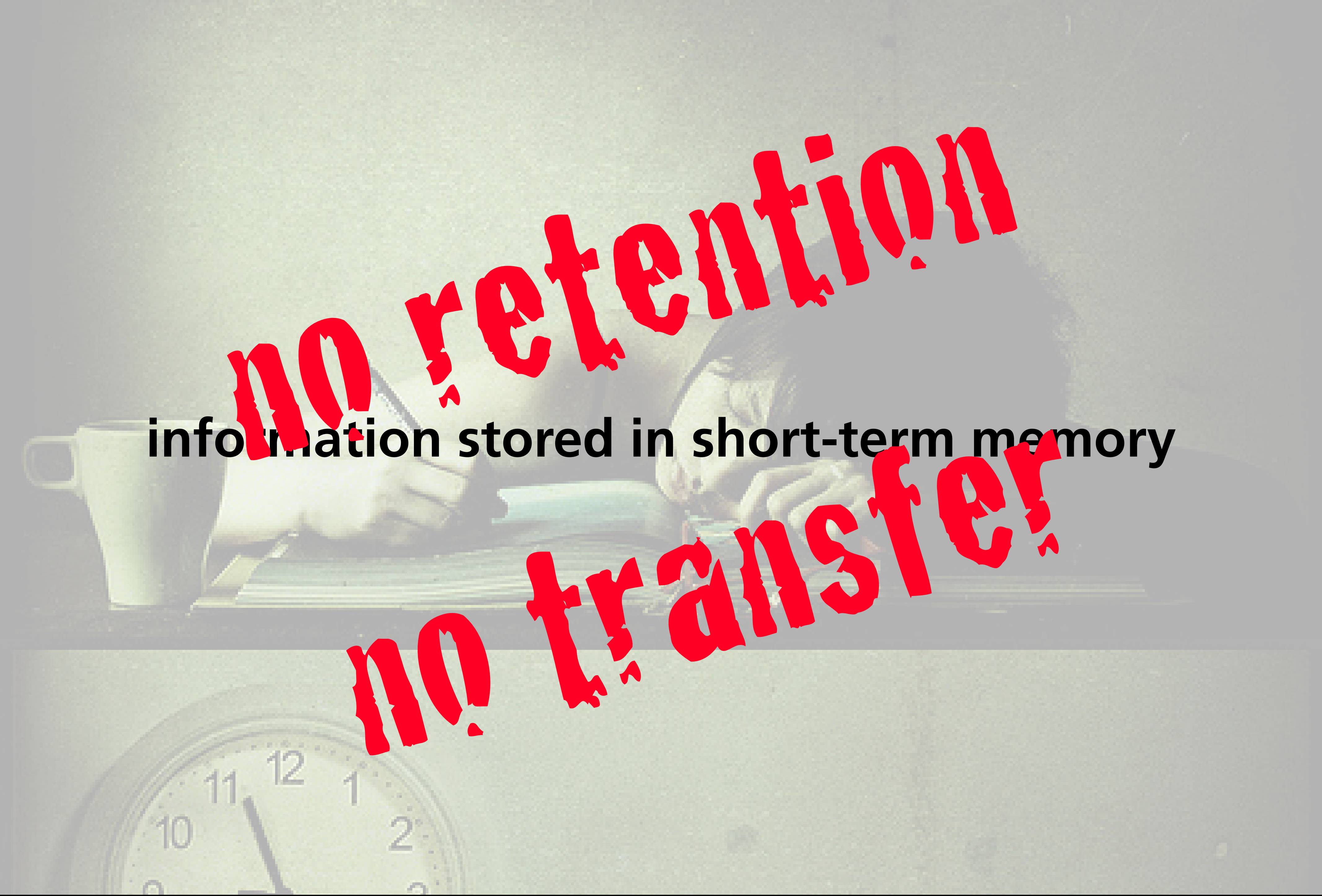
1 what

2 how

3 when



information stored in short-term memory



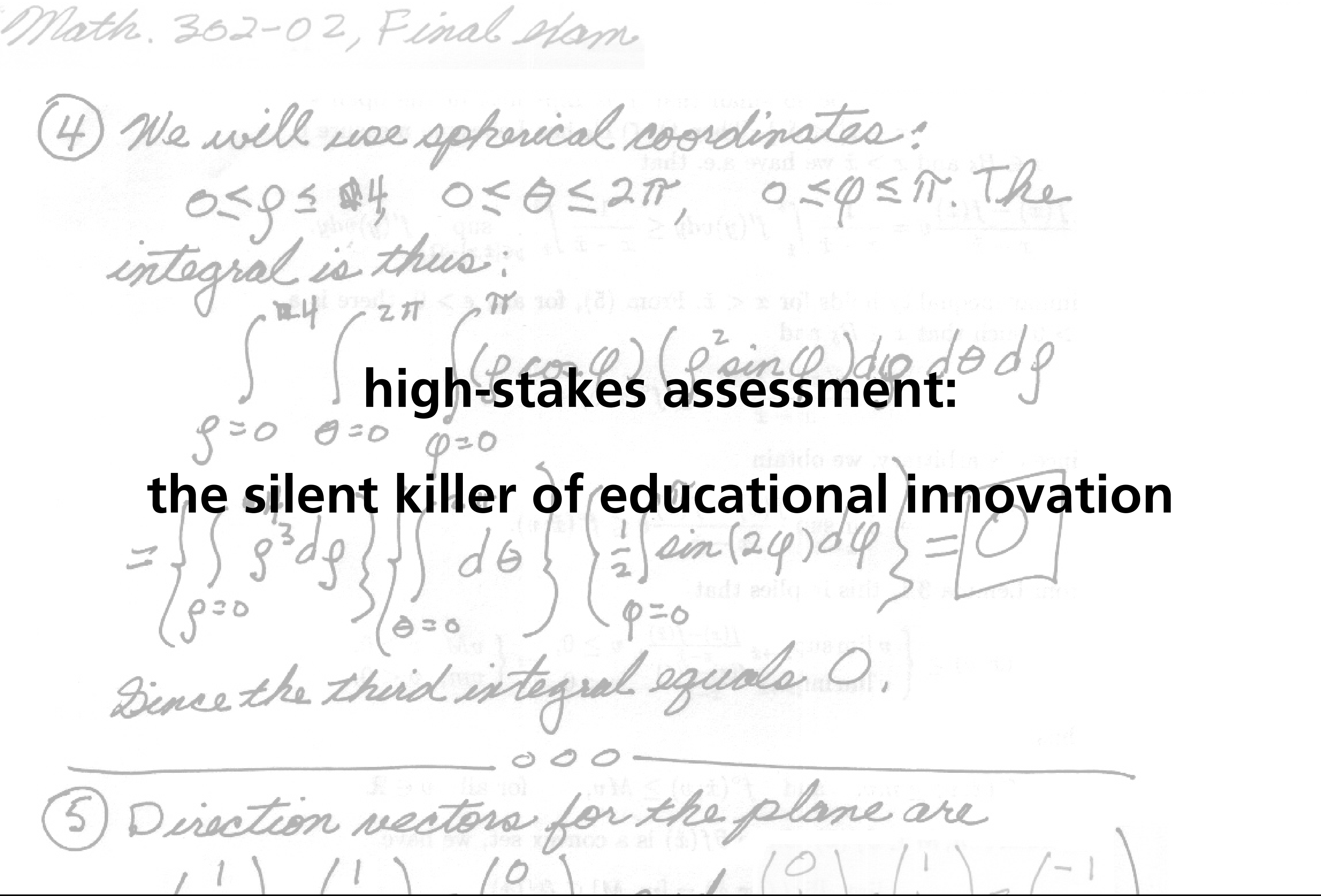
information stored in short-term memory

no retention

no transfer

high-stakes assessment:

the silent killer of educational innovation



Math. 362-02, Final Exam

④ We will use spherical coordinates: $0 \leq \rho \leq 4$, $0 \leq \theta \leq 2\pi$, $0 \leq \varphi \leq \pi$. The integral is thus:

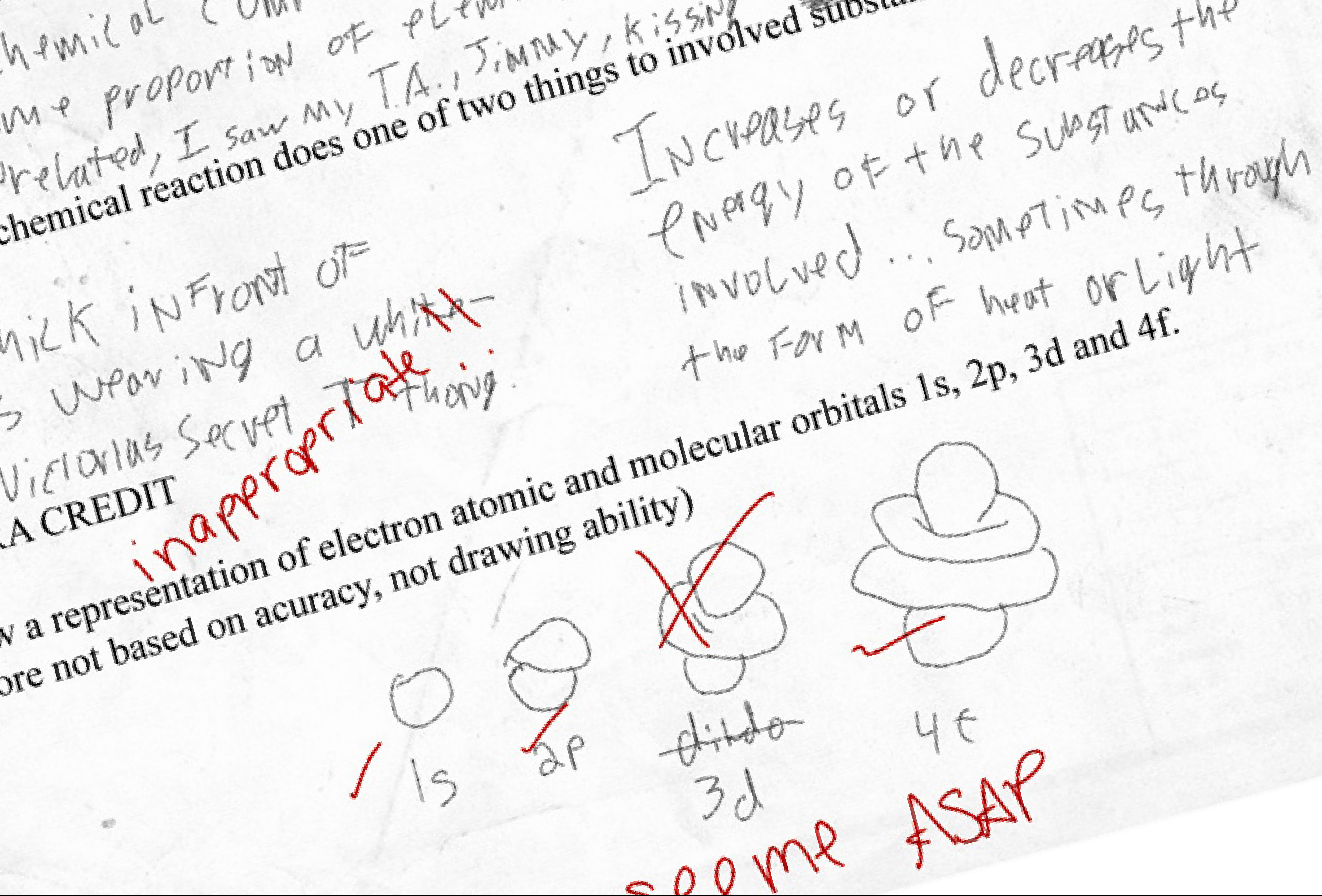
$$\int_{\rho=0}^{4}\int_{\theta=0}^{2\pi}\int_{\varphi=0}^{\pi}(\rho\cos\varphi)(\rho^2\sin\varphi)\,d\varphi\,d\theta\,d\rho$$

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

Since the third integral equals 0.

⑤ Direction vectors for the plane are

1. what
2. how
3. when



hemical comp

me proportion of elem

related, I saw my T.A., Jimmy, kissing

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

ick in front of

s wearing a whitt-

Victorias Secret Tthong.

inapperpriate

A CREDIT

w a representation of electron atomic and molecular orbitals 1s, 2p, 3d and 4f.

ore not based on acuracy, not drawing ability)

1s

2p

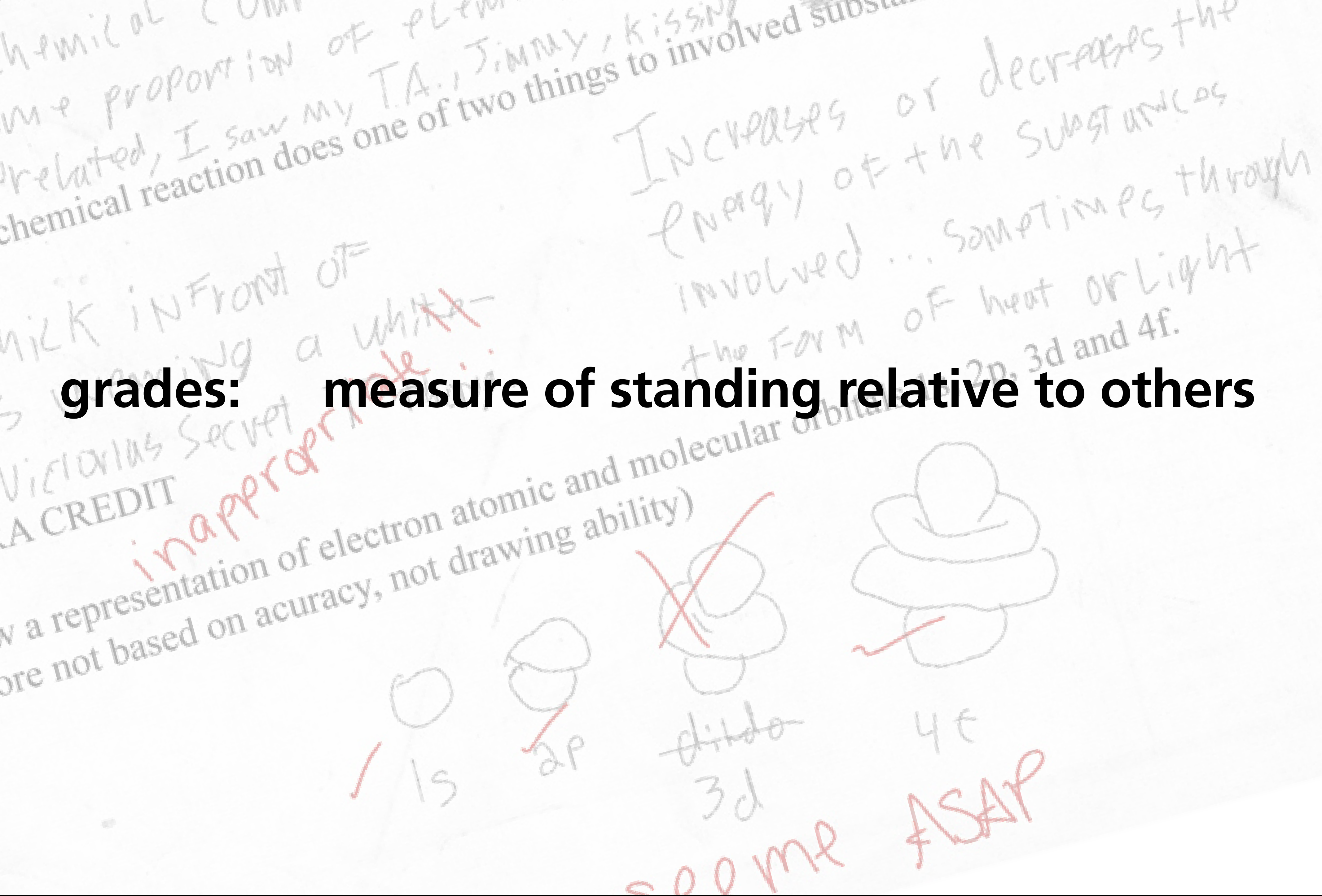
~~dildo~~ 3d

4f

see me ASAP

1 what **2** how **3** when

grades: measure of standing relative to others



...hemical com...

...me proportion of elem...

...related, I saw my T.A., Jimmy, kissing

...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

...wing a white

...vicious secret

...A CREDIT

inappropriate

...w a representation of electron atomic and molecular orbitals 2p, 3d and 4f.

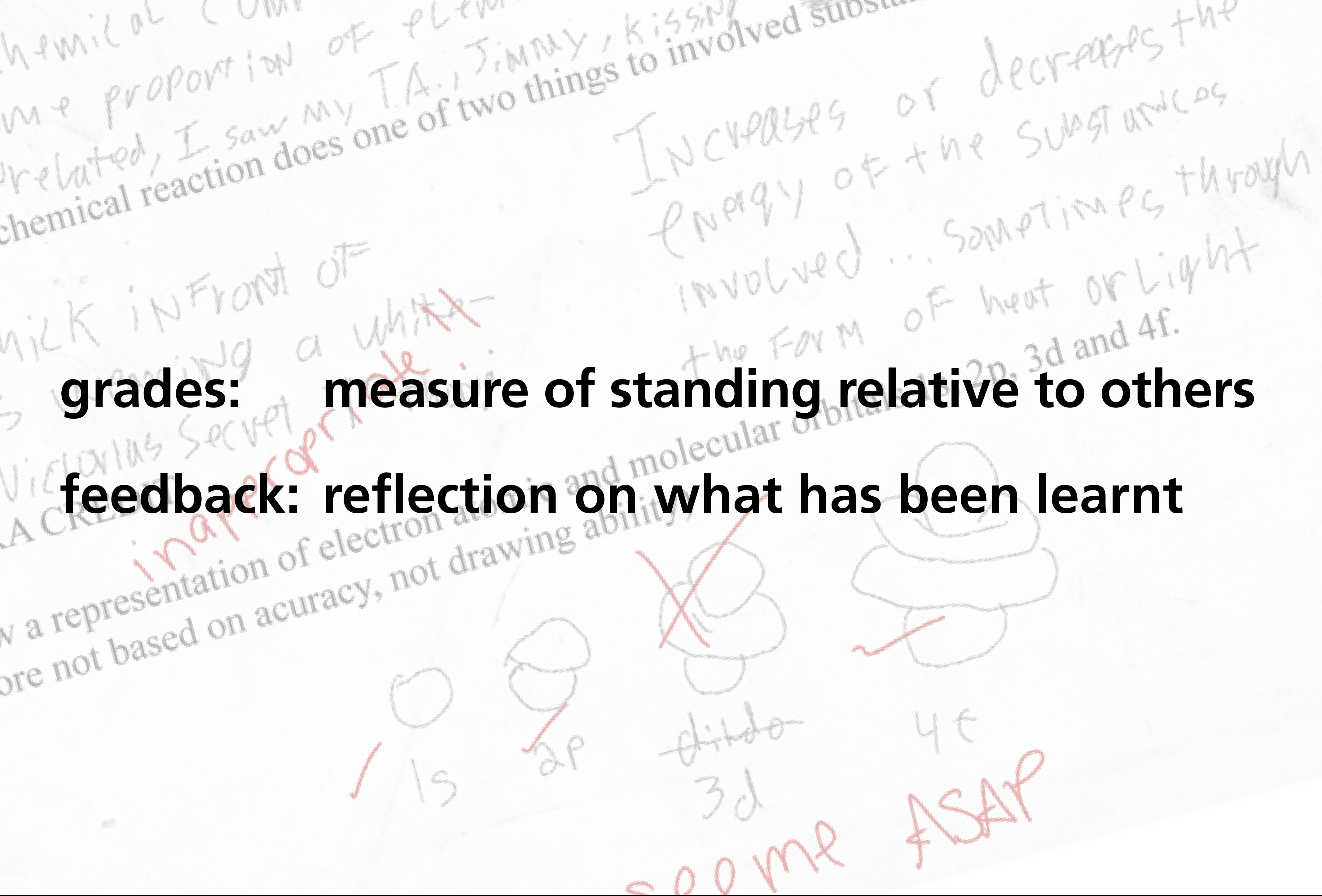
...ore not based on acuracy, not drawing ability)

see me ASAP

① what ② how ③ when

grades: measure of standing relative to others

feedback: reflection on what has been learnt



hemical com

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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

having a white

Victorias Secret

inappropriate!!

2p, 3d and 4f.

and molecular orbitals

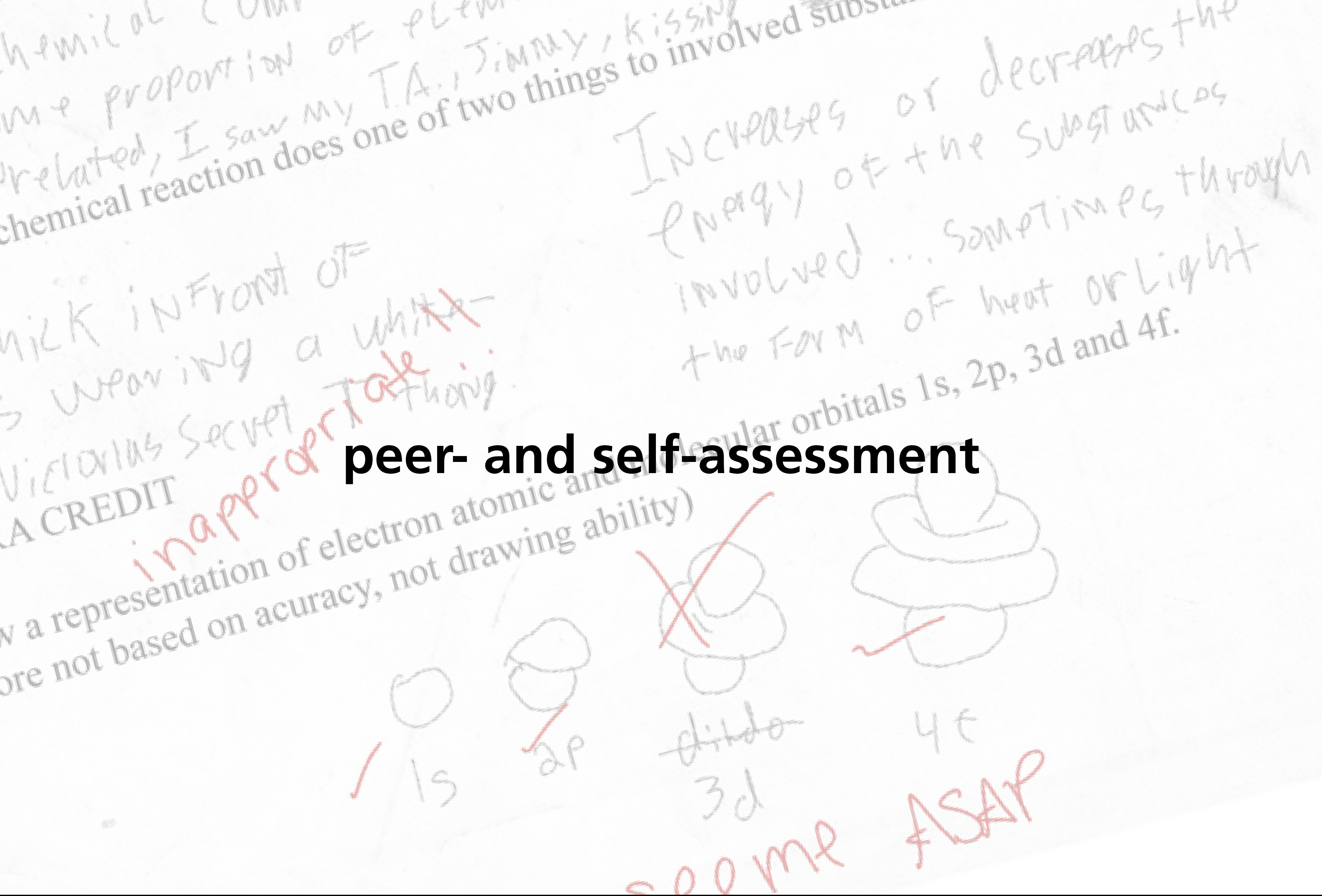
A CRE

w a representation of electron

ore not based on acuracy, not drawing ability.

see me ASAP

① what ② how ③ when



hemical com

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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

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Victorias Secret thong.

inapperpriate

A CREDIT

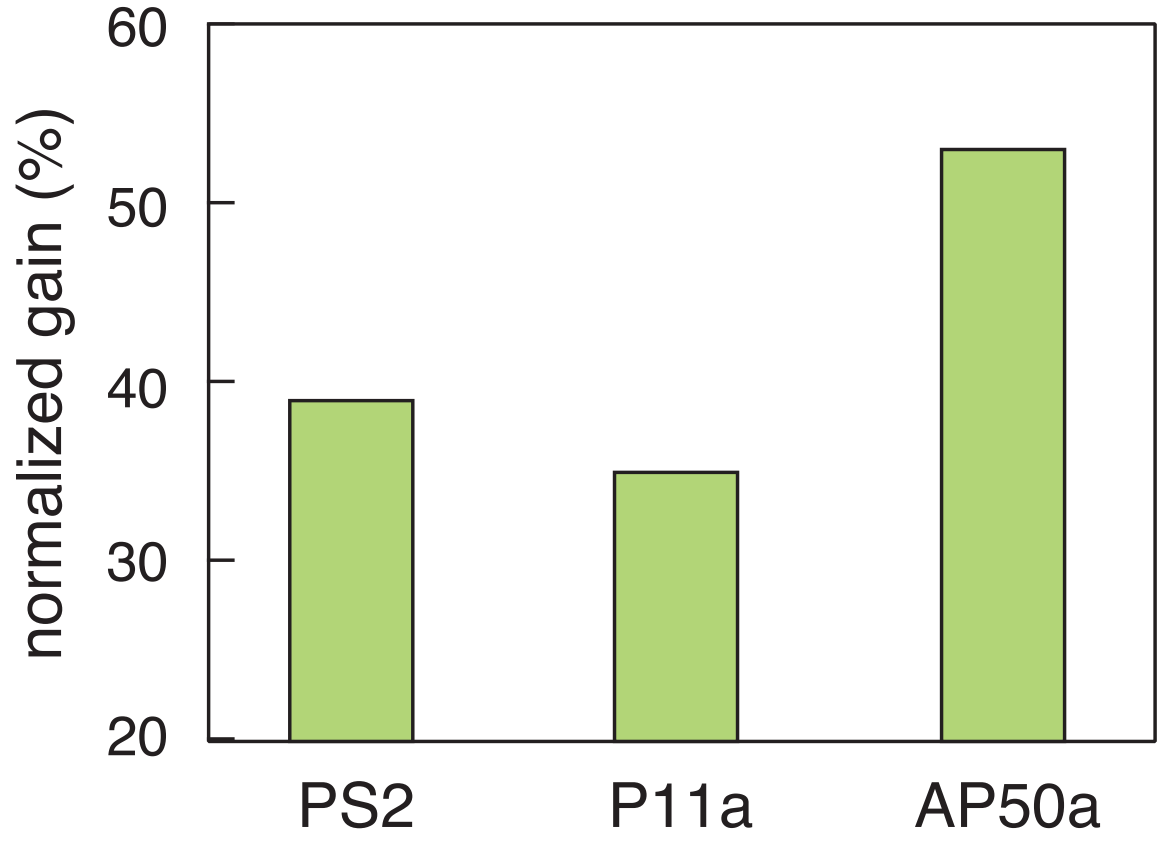
w a representation of electron atomic and molecular orbitals 1s, 2p, 3d and 4f.

ore not based on acuracy, not drawing ability)

see me ASAP

peer- and self-assessment

① what ② how ③ when



① **what**

② **how**

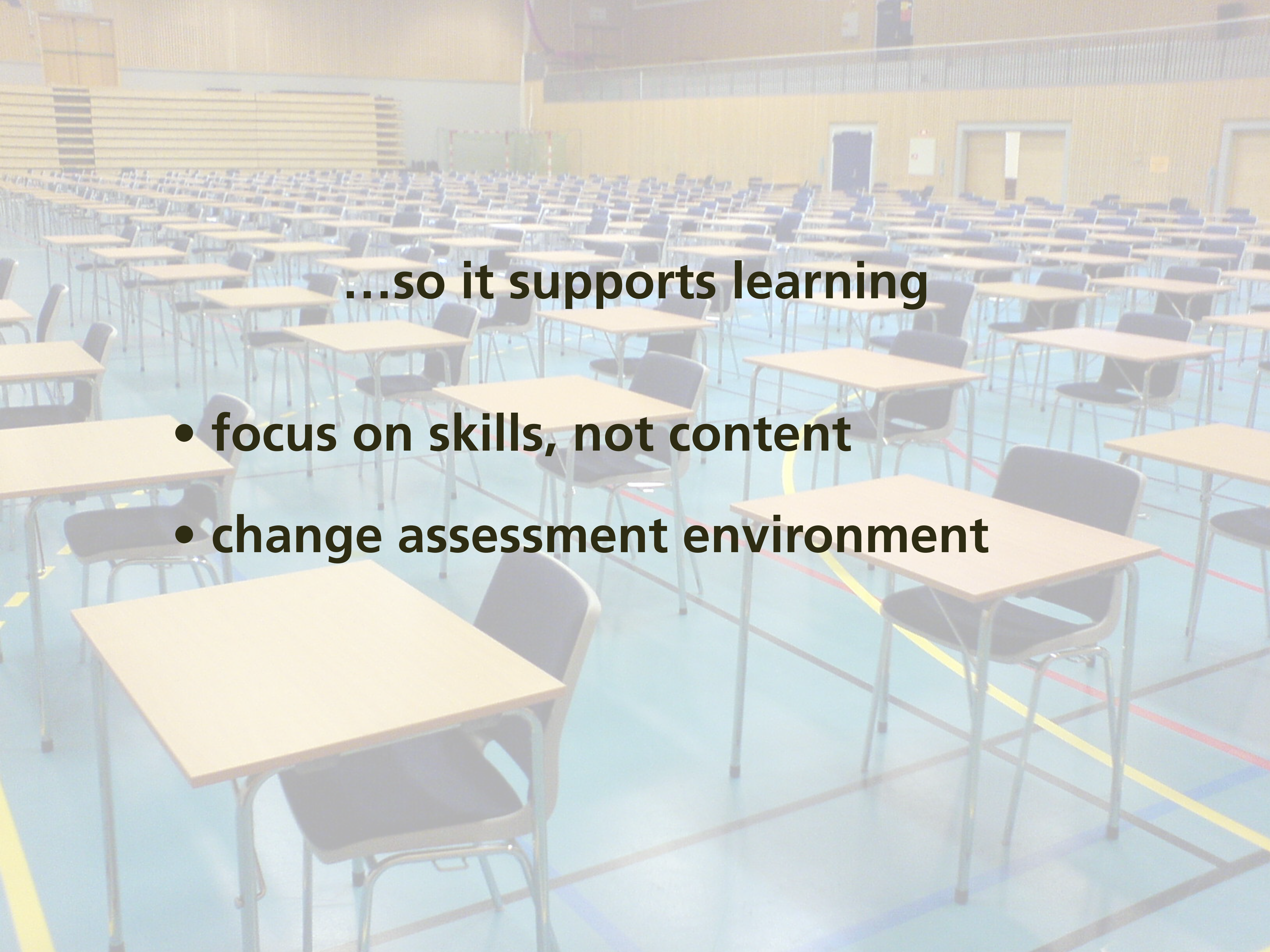
③ **when**

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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