

Teaching in Virtual Environments

APRU Global Health Program at the University of Southern California

in collaboration with

Global STEM Education Program at the University of Oregon

May 5, 6-7:30pm US Pacific

May 6, 9-10:30am Hong Kong

Connecting Classroom Teaching to the Real World

Eleanor Vandegrift, University of Oregon &

Adik Wibowo, University of Indonesia

May 19, 6-7:30 pm US Pacific

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Developing Learners' Practical Skills in Remote Classrooms

Eleanor Vandegrift, University of Oregon &

Yotsawee Saifah, Chulalongkorn University

June 2, 6-7:30pm US Pacific

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Reflections on a Year of Virtual Teaching

Eleanor Vandegrift,, University of Oregon &

Melissa Withers, University of Southern California



USC



APRU
Global Health



**UNIVERSITY OF
OREGON**

More info or to register: apru.org/our-work/pacific-rim-challenges/global-health

Welcome and Introduction

Mellissa Withers, University of Southern California

Goals for Today

1. Provide pedagogical, technology, and peer support to faculty across the APRU network teaching remotely.
2. Create opportunities for APRU affiliated faculty to connect and share resources and experiences

Format



30 MINUTES EXPERT
PANEL



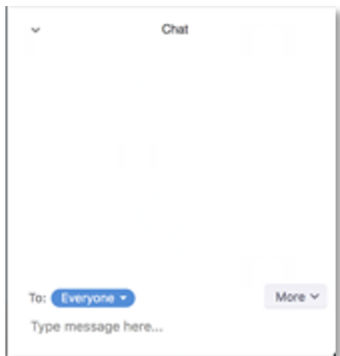
30 MINUTES SMALL
GROUP DISCUSSION



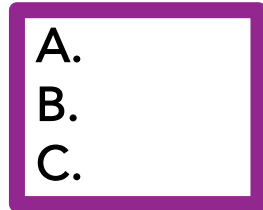
30 LARGE GROUP
DISCUSSION

Interactions Today

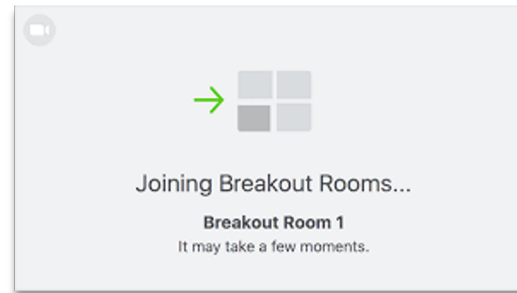
Zoom Chat



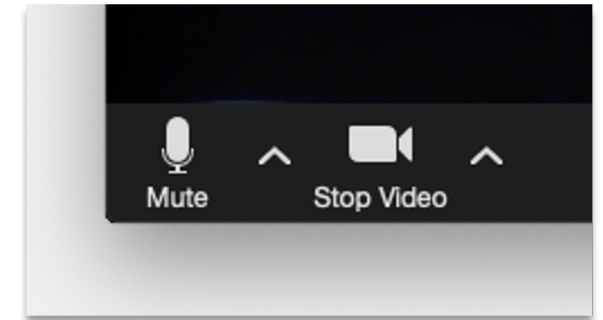
Zoom Polling



Breakout Rooms



Using Video and Audio



Think and make a
note for yourself





Chat: What type of practical skills
do you want students to learn?

Classroom applications

Elly Vandegrift,
University of Oregon

Chat: What skills are essential for students to learn in college?

Learning Priorities from Employers

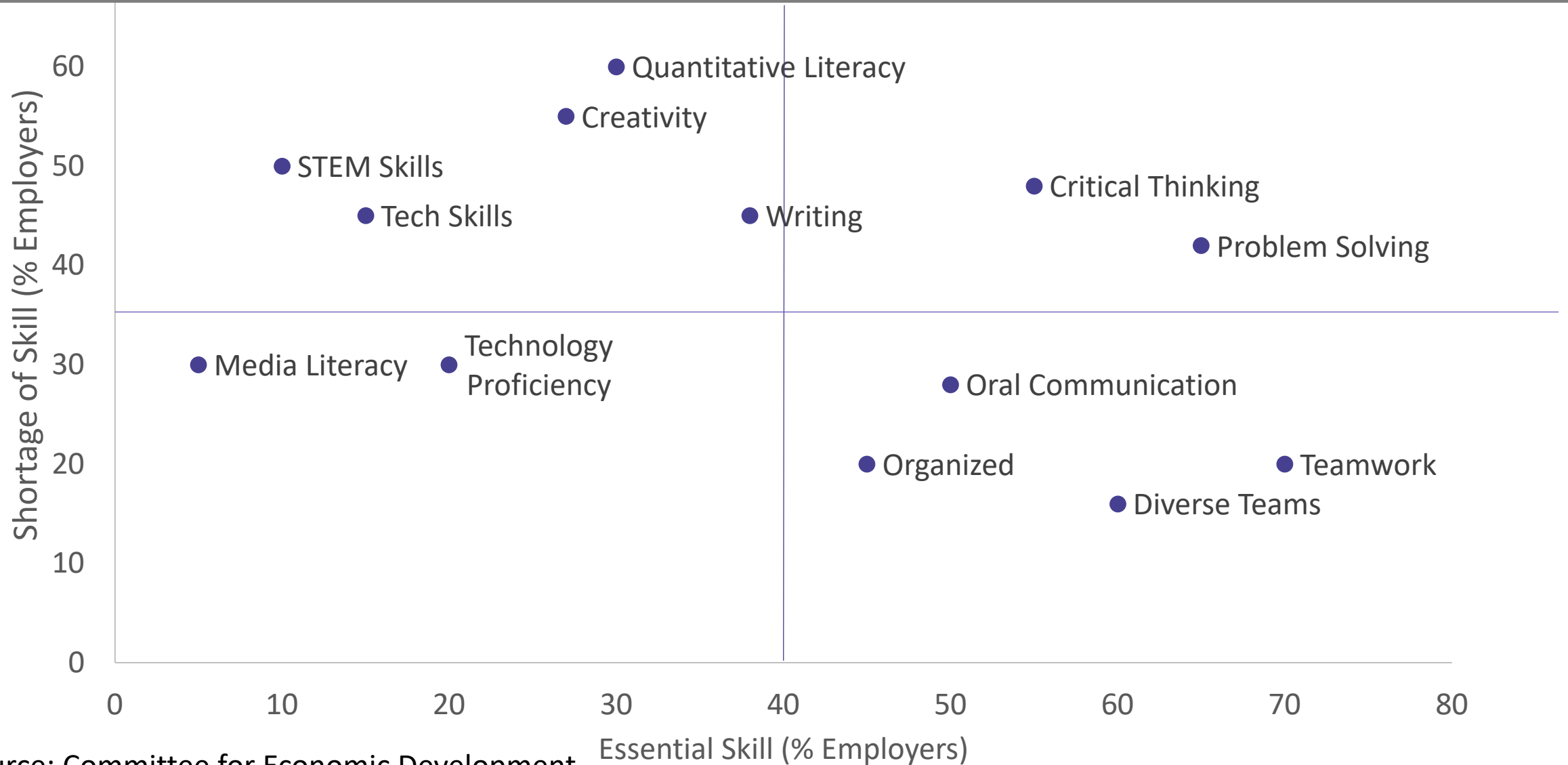
Very Important Skills for Recent College Graduates We Are Hiring*



* 8-10 ratings on a 0-to-10 scale; 15 outcomes tested

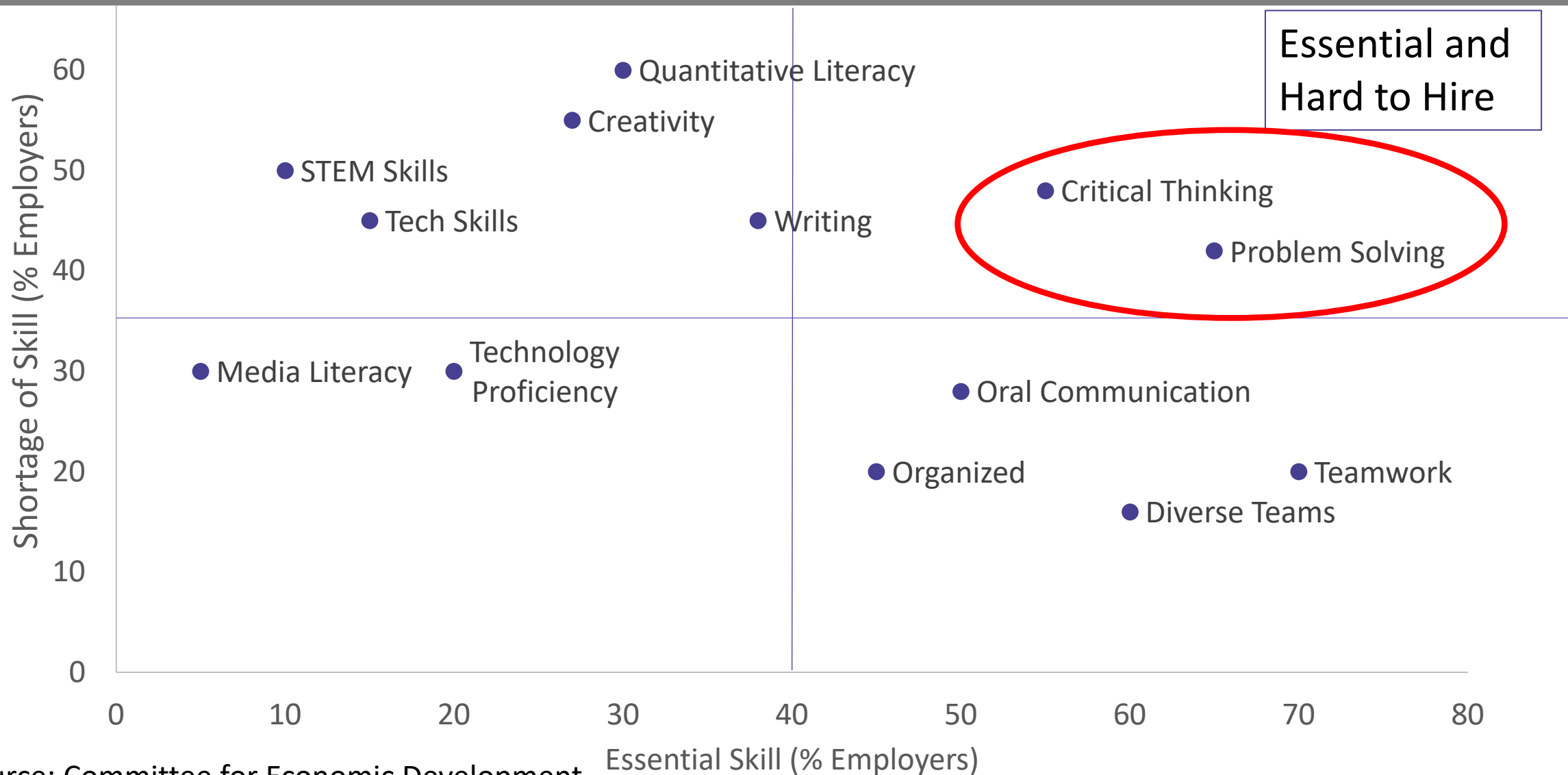
Zoom poll: Which of these are
hardest for students to learn?

Which Essential Skills are Hardest to Hire?



Source: Committee for Economic Development

Which Essential Skills are Hardest to Hire?

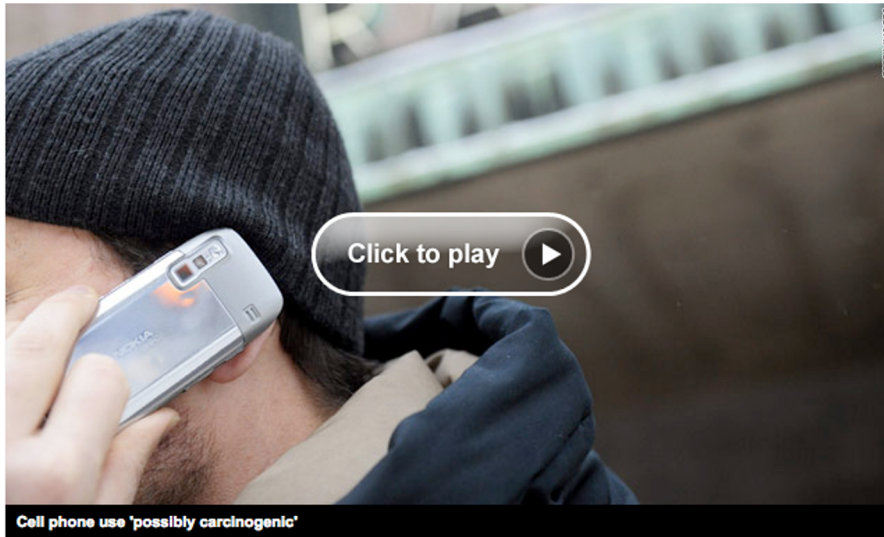


Source: Committee for Economic Development

Example Class activity to
practice critical thinking and
problem solving

Do cell phones cause cancer?

WHO: Cell phone use can increase possible cancer risk



(CNN) -- Radiation from cell phones can possibly cause cancer, according to the World Health Organization. The agency now lists mobile phone use in the same "carcinogenic hazard" category as lead, engine exhaust and chloroform.

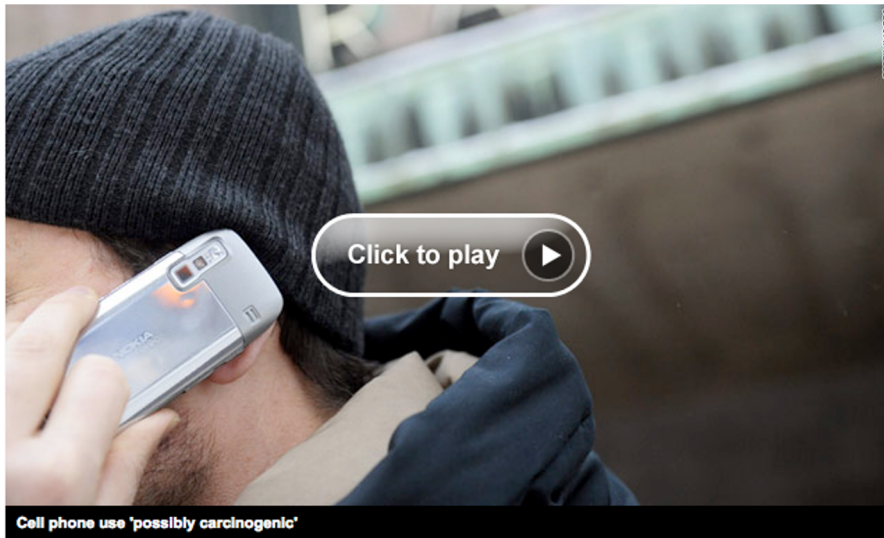
<http://edition.cnn.com/2011/HEALTH/05/31/who.cell.phones/index.html>

May 11, 2011

IARC Working Group on the Evaluation of Carcinogenic Risks to Humans. (2013). Non-ionizing radiation, Part 2: Radiofrequency electromagnetic fields. *IARC monographs on the evaluation of carcinogenic risks to humans*, 102(Pt 2), 1.

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Table 2.11 Time trends in use of mobile phones and cancer occurrence

Reference	Location	Exposure data	Trend in exposure	Organ site	Period of cancer occurrence	Cancer data	Cancer trend
Cook et al. (2003)	New Zealand	Proportion of mobile-phone subscribers in the New Zealand population	Sharp increase from 1987 (1%) to 1998 (> 30%), particularly since 1993 (5%)	All brain and salivary gland; temporal lobe; parietal lobe	1986–98	Incidence rates from New Zealand Cancer Registry	Flat trends from 1986 to 1998
Hardell et al. (2003)	Sweden	None	Presumably sharp increases between 1980s and 2000	Vestibular schwannoma	1960–98	Incidence rates from Swedish Cancer Registry	Increase from 1960 to 1985, then rather flat
Lönn et al. (2004)	Denmark, Finland, Norway, Sweden	Proportion of mobile-phone subscribers per year in each country	Sharp increase from 1987 (1–2%) to 1998 (30–50%) particularly after 1993	All brain and subtypes	1969–98	Incidence rates from Nordic National Cancer Registries	Gradual increase from 1968–1983; flat from 1983–96; slight upticks in 1997 and 1998
Muscat et al. (2006)	USA (SEER Program); 17 registries; about one quarter of the USA population	Unclear	From 0% to about 50% of the population; "exponential increase"	Neuronal tumours	1973–2002	Incidence rates from SEER	No change in incidence between two periods (1973–85 and 1986–2002)

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Conclusion:

Modest increase in
Glimoa cancer in high
cell phone use group

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Do cell phones cause cancer?

No Cellphone-Cancer Link in Large Study

By TARA PARKER-POPE



Mary F. Calvert for The New York Times

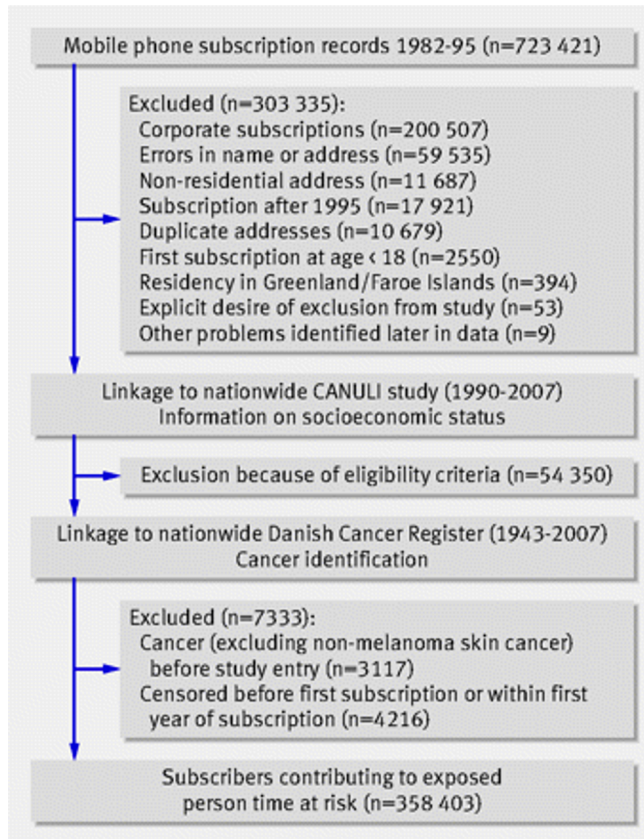
What is the link between cellphones and cancer?

A major study of nearly 360,000 cellphone users in Denmark found no increased risk of brain tumors with long-term use.

<https://well.blogs.nytimes.com/2011/10/20/study-finds-no-link-between-cellphones-and-brain-tumors/> October 20, 2011

Frei, P., Poulsen, A. H., Johansen, C., Olsen, J. H., Steding-Jessen, M., & Schüz, J. (2011). Use of mobile phones and risk of brain tumours: update of Danish cohort study. *Bmj*, 343, d6387.

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Do cell phones cause cancer?

Conclusion:

360,000 cell phone users in Denmark. No increase in cancer for people who owned and used cell phones for longer.

Frei, P., Poulsen, A. H., Johansen, C., Olsen, J. H., Steding-Jessen, M., & Schüz, J. (2011). Use of mobile phones and risk of brain tumours: update of Danish cohort study. *Bmj*, 343, d6387.

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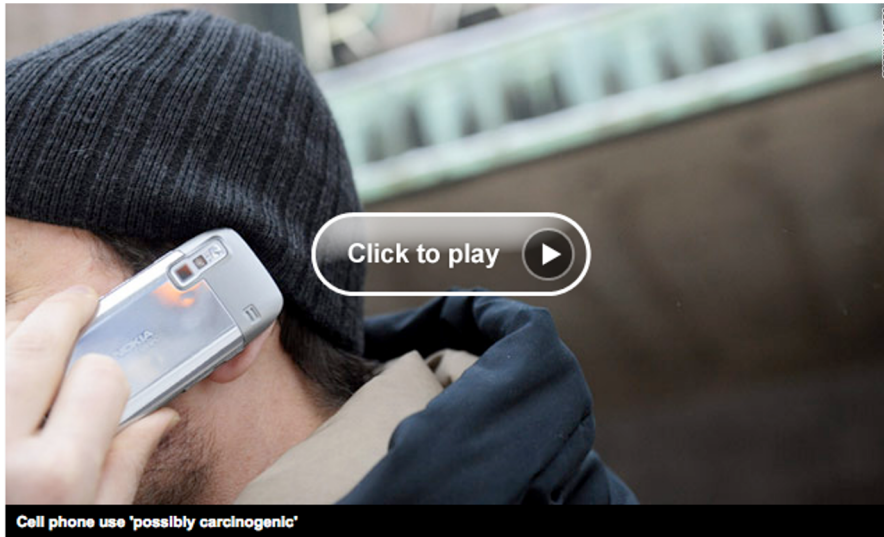
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October 20, 2011

Why is this a controversy?

- A. The media likes stirring up controversy, we actually know that cell phones do not cause cancer.
- B. Cell phones are known to cause cancer, but the cell phone companies don't want you to know.
- C. Most studies are based on correlations, and the studies have reported conflicting findings.

What would you like to
know to solve this
scientific controversy?

With your group, design
a possible experiment to
test if cell phones cause
cancer.

Representative student answers

“2 groups of mice: exposed cell phones or not.”

“Tape cell phones to 100 people’s heads and measure radiation for 30 days.”

“Measure radiation levels from different phones.”

Do cell phones cause cancer?

The New York Times

Study of Cellphone Risks Finds 'Some Evidence' of Link to Cancer, at Least in Male Rats

Many caveats apply, and the results involve radio frequencies long out of routine use.



Rodents were exposed to radiation at 900 megahertz, a frequency typical of the second generation of cellphones that prevailed in the 1990s, when the study was first conceived. Michael Nagle/Bloomberg

By William J. Broad

Nov. 1, 2018





[Exp Ther Med](#). 2021 Jan; 21(1): 23.

PMCID: PMC7690245

Published online 2020 Nov 9. doi: [10.3892/etm.2020.9455](https://doi.org/10.3892/etm.2020.9455)

PMID: [33262809](https://pubmed.ncbi.nlm.nih.gov/33262809/)



This article has been retracted.

Retraction in: [Exp Ther Med. 2021 May; 21\(5\): 472](#) See also: [PMC Retraction Policy](#)

Exposure to radiofrequency radiation increases the risk of breast cancer: A systematic review and meta-analysis

[Ya-Wen Shih](#),¹ [Anthony Paul O'Brien](#),² [Chin-Sheng Hung](#),^{3,4} [Kee-Hsin Chen](#),^{5,6,7,7}
[Wen-Hsuan Hou](#),^{8,9,10,11} and [Hsiu-Ting Tsai](#)^{1,5}

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This article has been retracted. See [Exp Ther Med. 2021 May; 21\(5\): 472](#).

Domains of Learning

Yotsawee Saifah, Chulalongkorn University

Developing Learners' Practical Skills in Remote Classrooms

YOTSAWEE SAIFAH, PHD
Chulalongkorn University



Reading & Writing

Presenting Information

Resilient

Problem Solving

Playing an Instrument

Skateboarding

Driving a Car



Collaborative
Working

Calculating

Critical Thinking

Selective Attention

Making Friends

Operating a Machine

Listening and Speaking
Mandarin

Emotional management



Cognitive Domain

Reading & Writing

Problem Solving

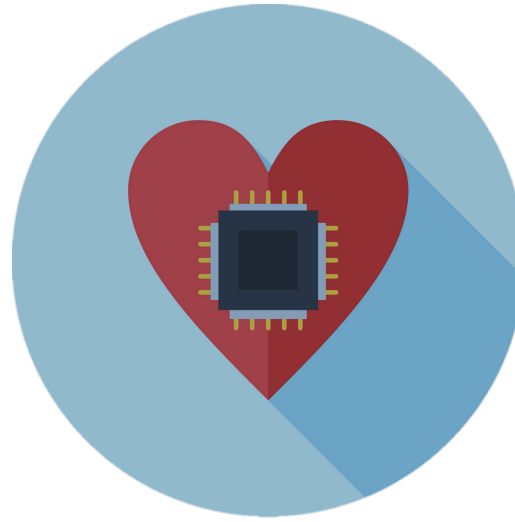
Calculating

Selective Attention

Presenting Information

Critical Thinking

Listening & Speaking Mandarin



Affective Domain

Resilient

Making Friends

Collaborative Working

Emotional management



Psychomotor Domain


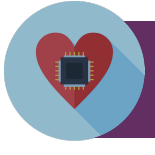
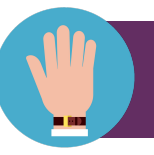
Driving a Car

Skateboarding

Operating a Machine

Playing an Instrument

Learners' learning could be categorized into THREE types of domains....

	 Cognitive Domain	 Affective Domain	 Psychomotor Domain
What to Teach	Knowledge and all intellectual behaviors and required thinking skills	Expression of feelings and acceptance of attitudes, opinions or values	Acquired skills that integrate mental and muscular activity
How to Teach	Sharing information and Encouraging students to think methodologically	Leading student to more interact with peers or role-model	Leading student to practice and learn through experiential learning

Key: Choose the right (teaching) strategy to teach your students a particular domain of learning!

Higher Order Skills



Lower Order Skills

Naturalization

High level of performance achieved with actions becoming second nature.

Articulation

Several skills can be performed together in a harmonious way.

Precision

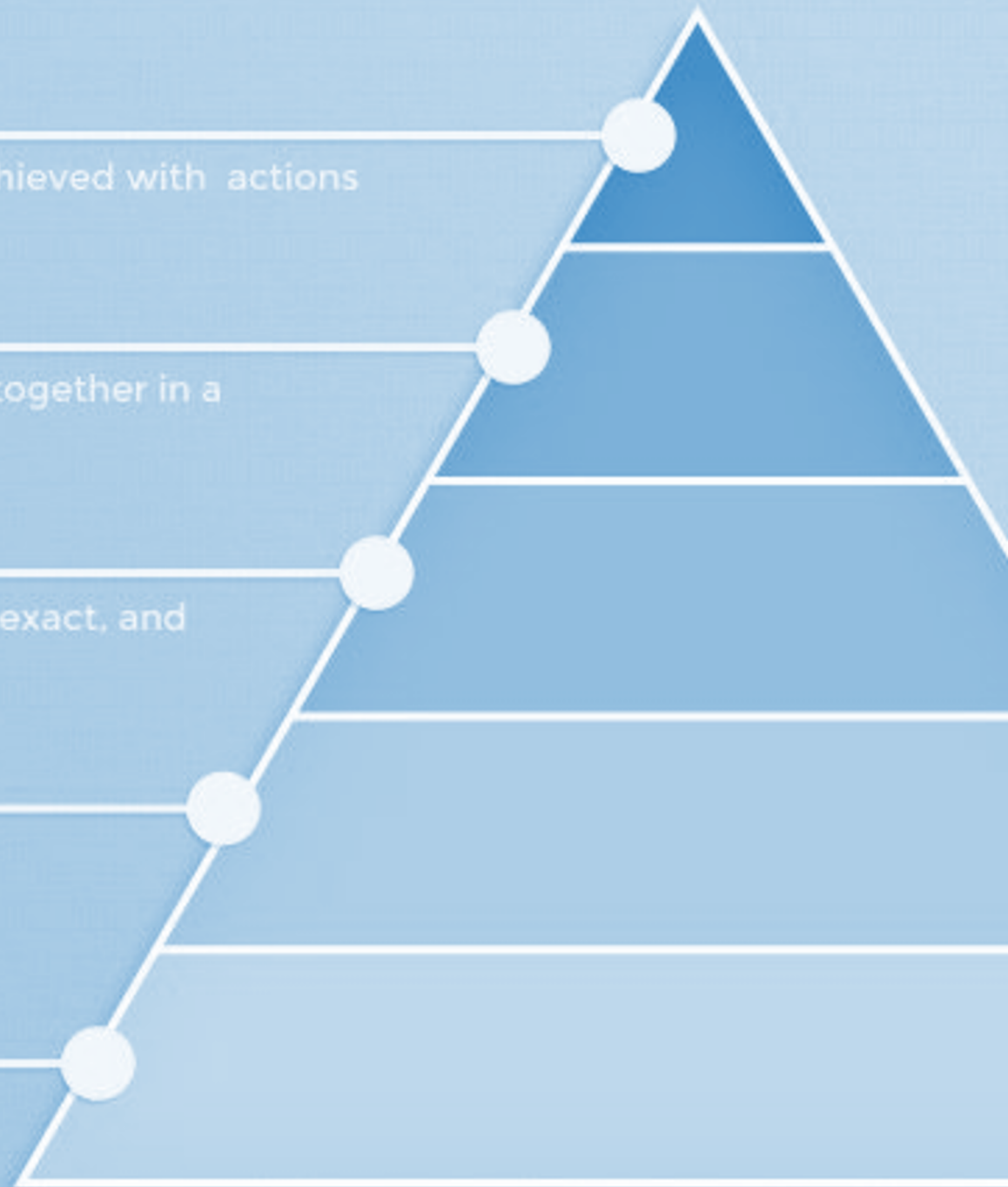
Performance becomes more exact, and action is more precise.

Manipulation

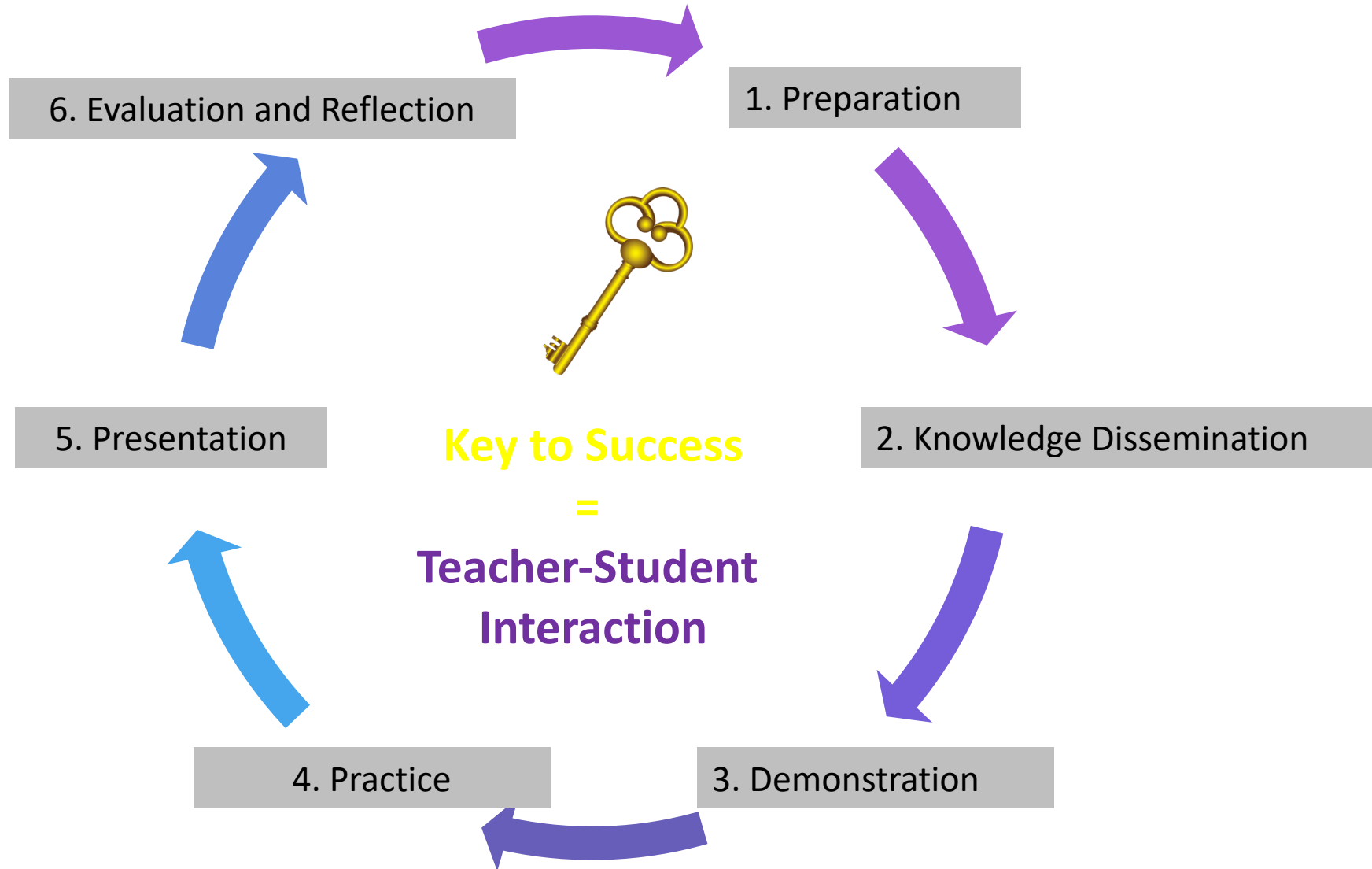
Actions performed through memorization or following directions.

Imitation

Learns by watching and imitating actions.



Six Steps of Teaching a Practical Skills to Learners



Activity 1

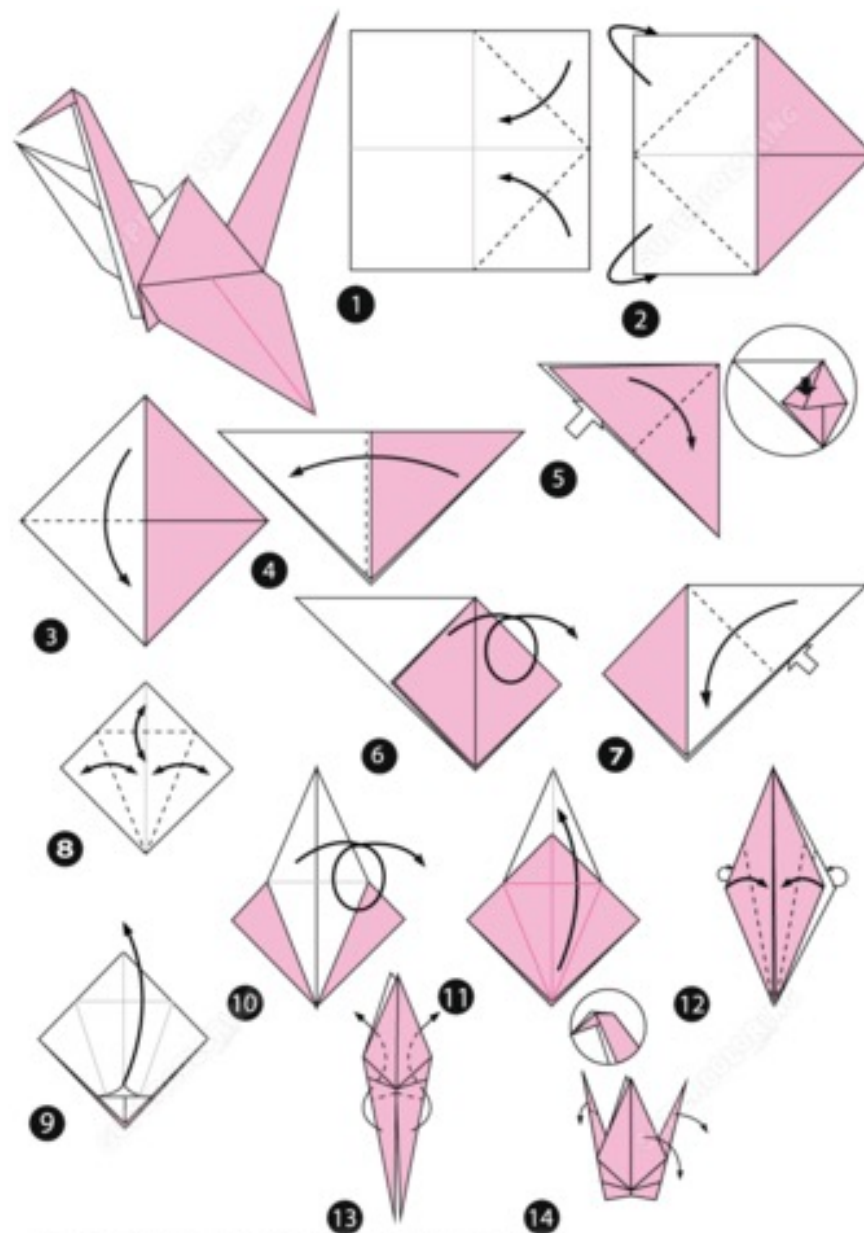


Image printed on www.supercoloring.com - for personal use only - reproduction is prohibited

As a learner, how do you feel after finishing the first activity?

Activity 2

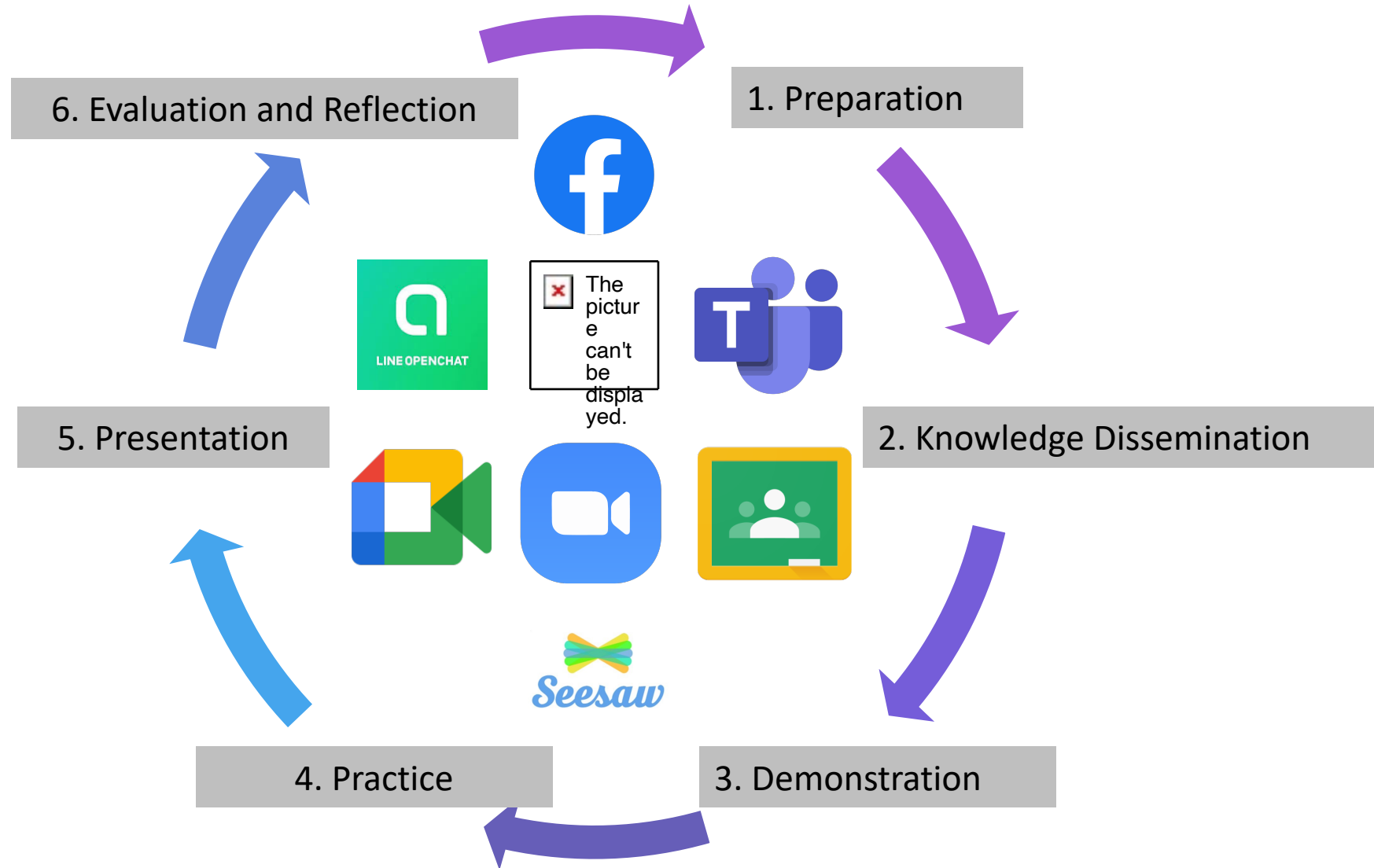


Source: <https://www.youtube.com/watch?v=Ys9t5lgmkII>

As a learner, how do you feel after finishing the
first activity?

Do you feeling during the second activity differ
from the first one?
Why?

Six Steps of Teaching a Practical Skills to Learners



How to Evaluate Learners' Performance of Practical Skill(s)

Key: Using Assessment with **Scoring Rubric**

Sample

Assessing "Singing Performance" with Analytic Rubric

Pitch	Superior	Excellent	Very Good	Average	Poor
	Virtually no errors. Pitch is very accurate.	An occasional isolated error, but most of the time pitch is accurate and secure.	Some accurate pitches, but there are frequent and/or repeated errors.	Very few accurate or secure pitches.	Who needs pitch?
Rhythm	Superior	Excellent	Very Good	Average	Poor
	The beat is secure and the rhythms are accurate for the music being sung.	The beat is secure and the rhythms are mostly accurate. There are a few duration errors, but these do not detract from the overall performance.	The beat is somewhat erratic. Some rhythms are accurate. Frequent or repeated duration errors. Rhythm problems occasionally detract from the overall performance.	The beat is usually erratic and rhythms are seldom accurate, detracting significantly from the overall performance.	Ain't got no rhythm.

How to Evaluate Learners' Performance of Practical Skill(s)

Key: Using Assessment with **Scoring Rubric**

Sample

Assessing "Singing Performance" with Holistic Rubric

To receive a score of:	The student:
1 (least skilled performance)	sings the song with no thought about breathing, tone quality, or posture; is unable to maintain his/her part; does not respond to the cues of the conductor; makes numerous memorization mistakes; talks often during the performance; sings without a steady beat.
2	sings with 4-6 mistakes; poor enthusiasm and concentration; talks occasionally during the performance.
3	sings with 2-3 mistakes; fair enthusiasm and concentration.
4	sings song with 1 or fewer mistakes in memory, part maintenance, vocal tone, posture, breathing, blend, concentration, expressiveness, etc.; demonstrates concentration and interest while singing.
5 (most skilled performance)	sings song, maintaining own part, using proper breathing techniques and a pleasing tone, with and without accompaniment, memorized, with appropriate expressive and stylistic devices and stage presence, blending vocal timbres, matching dynamic levels, singing with correct posture, excellent concentration and interest, and responding to the conductor as part of a group.

Breakout Room

Introduce yourselves
(Name + Institution)

Select a
Facilitator,
Time Keeper

Breakout Room

Introduce yourselves (Name + Institution)

Select a
Facilitator,
Time Keeper

1. How do you already help students develop practical skills in your courses?
2. Think about the “do cell phones cause cancer” class activity, what similar types of scenarios could you include in your classes? How did this activity allow you to practice with the 3 domains (cognitive, affective, and psychomotor)?
3. How do (or could use) you use the 3 domains (cognitive, affective, and psychomotor) of learning in your courses?

Chat: Reflection



1. What's one idea from today you want to use into your courses?

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