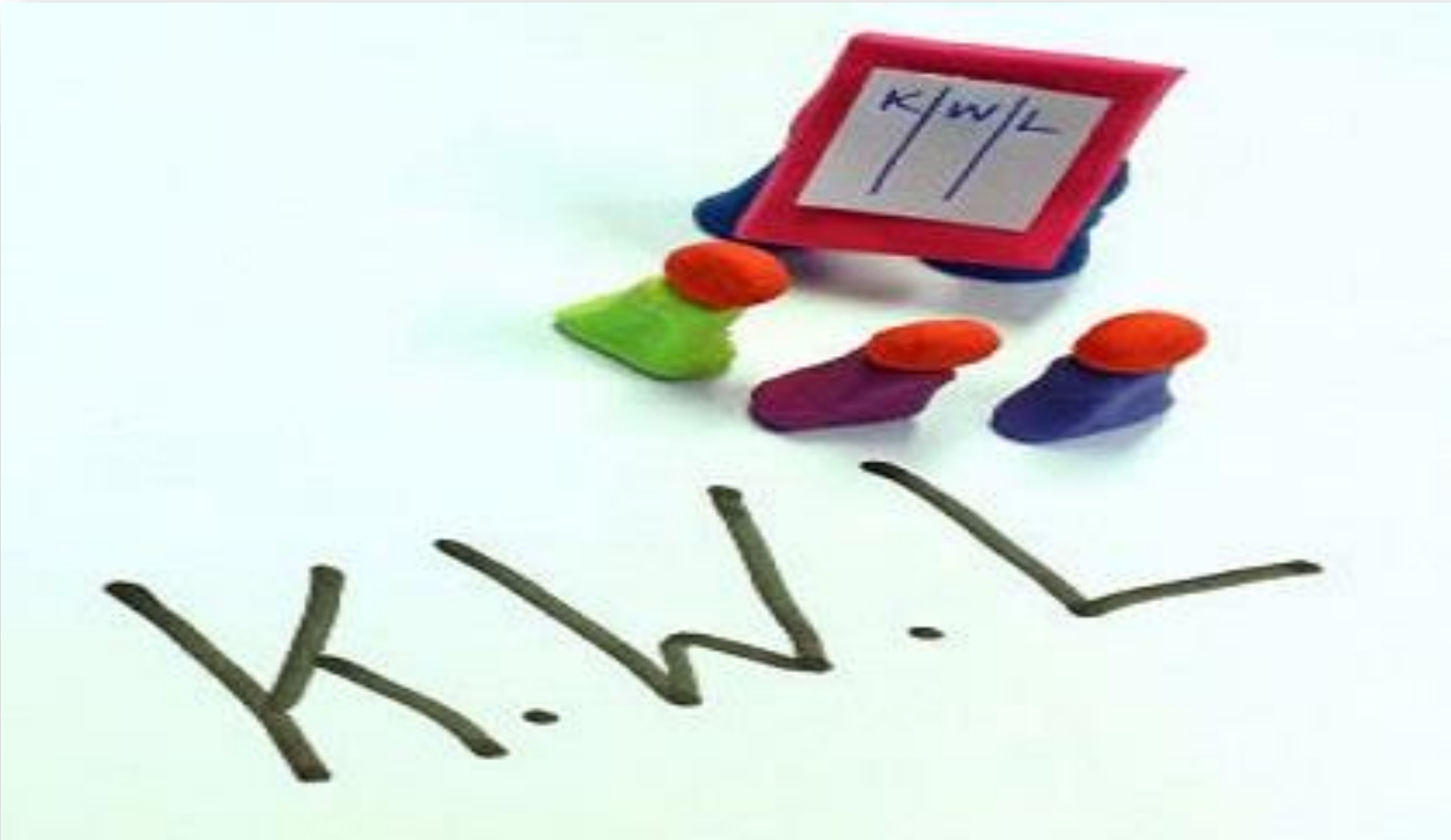


Understanding & Integrating the 21st Century Skills in EFL Classroom



Amal Al Qasmi – Nawal Al Amri – Is'haq Al Naibi





Video



21st
Century
Literacy
Skills

Other words in the cloud include: Civic, Communications, Innovation, Global Core, Critical-Thinking, Flexibility, Creativity, Leadership, Career, Self-Direction, Economic, Social, Collaboration, Subjects, Awareness, Financial, Initiative, Technology, Responsibility, Cross-Cultural, Learning, Entrepreneurial, Problem-Solving, Accountability, Information, Health, Media, Life, Adaptability, and Media.

Outline

- ▶ Overview of 21st Century Skills
- ▶ Critical Thinking Skills
- ▶ Problem Solving Skills
- ▶ Textbooks Analysis
- ▶ Teachers' and Students' Roles
- ▶ Assessment & Feedback
- ▶ Technology Integration
- ▶ Group Activities



Overview of 21st Century Skills



What do we mean by:



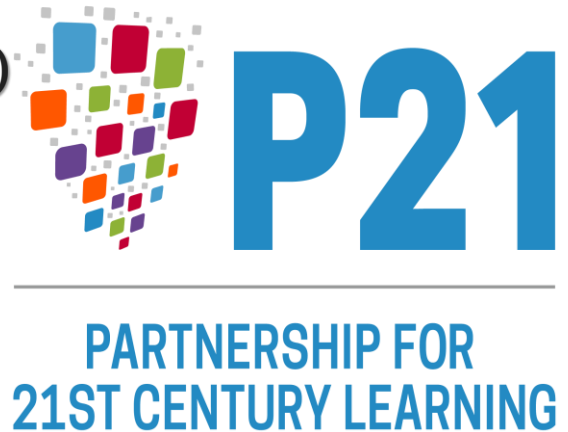
According to Ledward and Hirata (2011), 21st century skills are:

‘a blend of content knowledge, specific skills, expertise, and literacies necessary to succeed in work and life.’

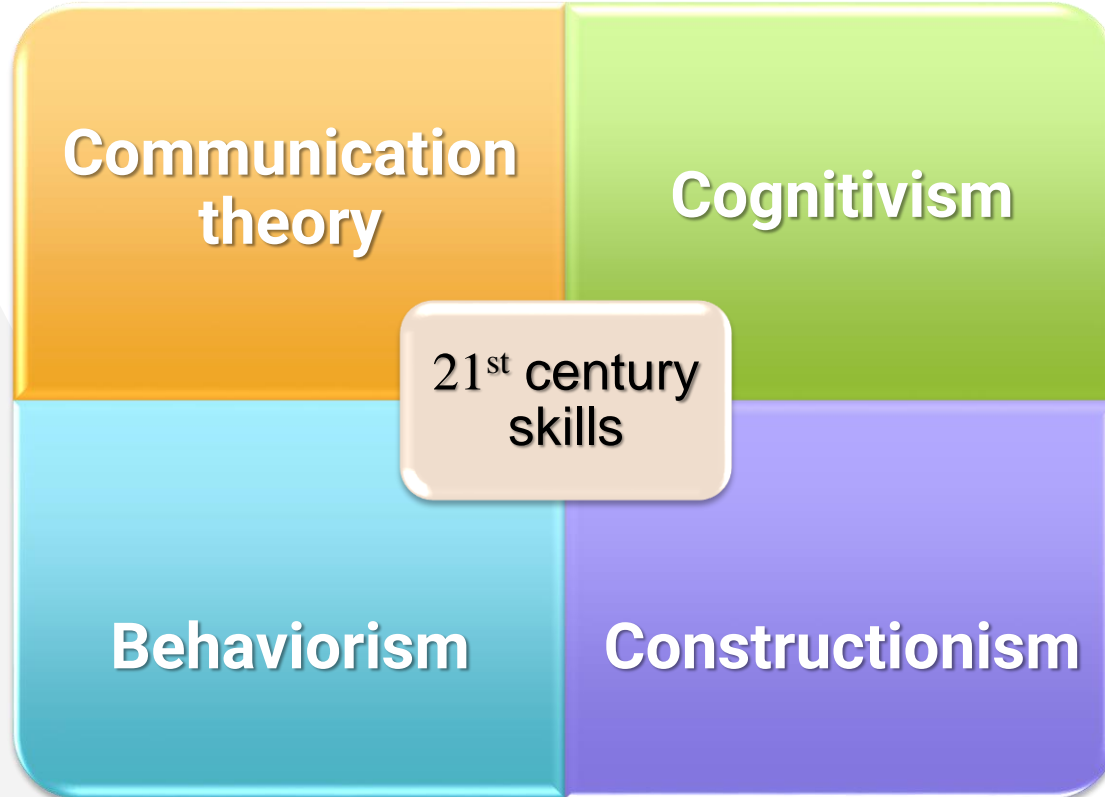


Historical Background

- ▶ As a result of globalization and digitization which have demands on people's working and educational life, the U.S Department of Education and many major companies founded the biggest organization for 21st Century skills in 2002.
- ▶ It was called P21 (Partnership for 21st Century learning)



Theories Underpinning 21st Century Skills



21st CENTURY THEMES



✓ Global Awareness

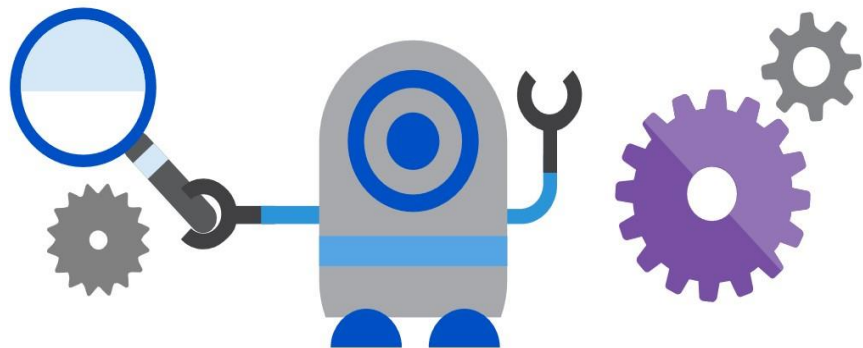
✓ Multiple Literacies:

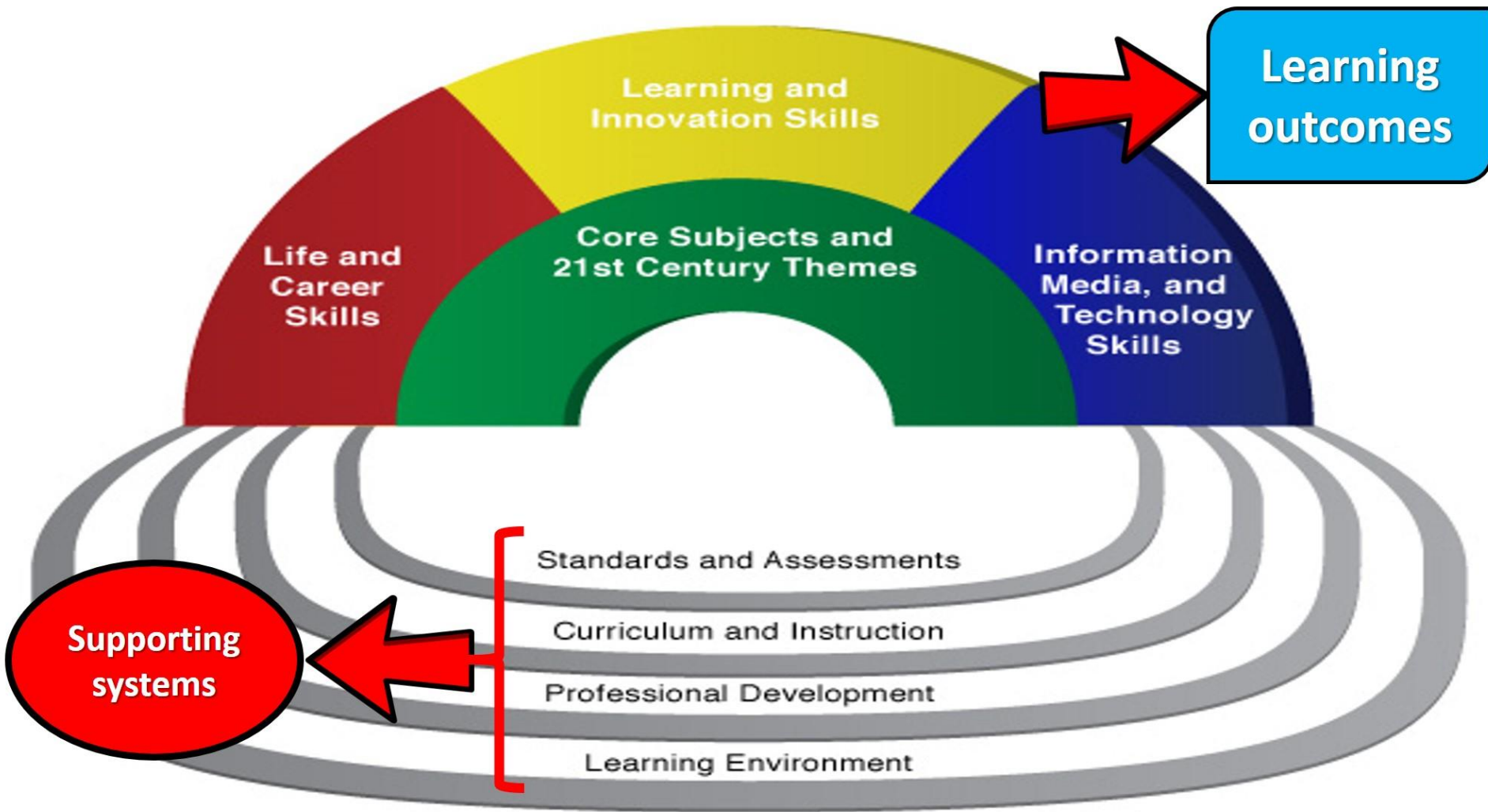
- Economic
- financial
- Business
- Cultural
- Civic
- Health
- Environment)



21st CENTURY SKILLS

FRAMEWORK





Learning and Innovation Skills

Life and Career Skills

Core Subjects and 21st Century Themes

Information Media, and Technology Skills

Learning outcomes

Standards and Assessments

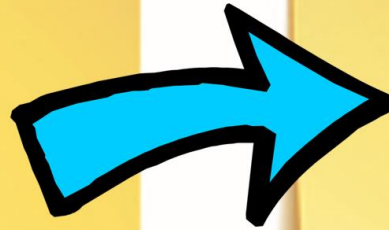
Curriculum and Instruction

Professional Development

Learning Environment

Supporting systems

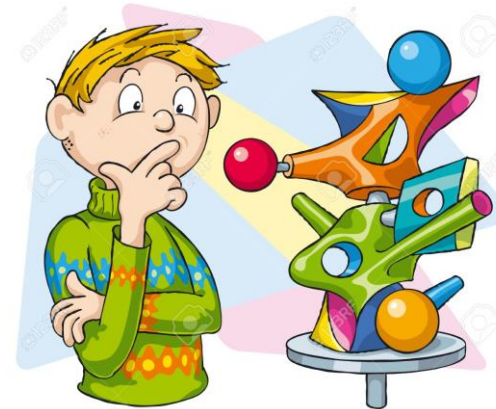
**Teacher
directed**



**Learner-
centered**

Why do we need them?

- ▶ How students apply core skills to everyday tasks?
- ▶ **“Foundational Literacies”**
- ▶ How students approach complex challenges?
- ▶ **“Competencies”**
- ▶ How students approach their changing environment?
- ▶ **“Character qualities”**



WHAT ARE THE



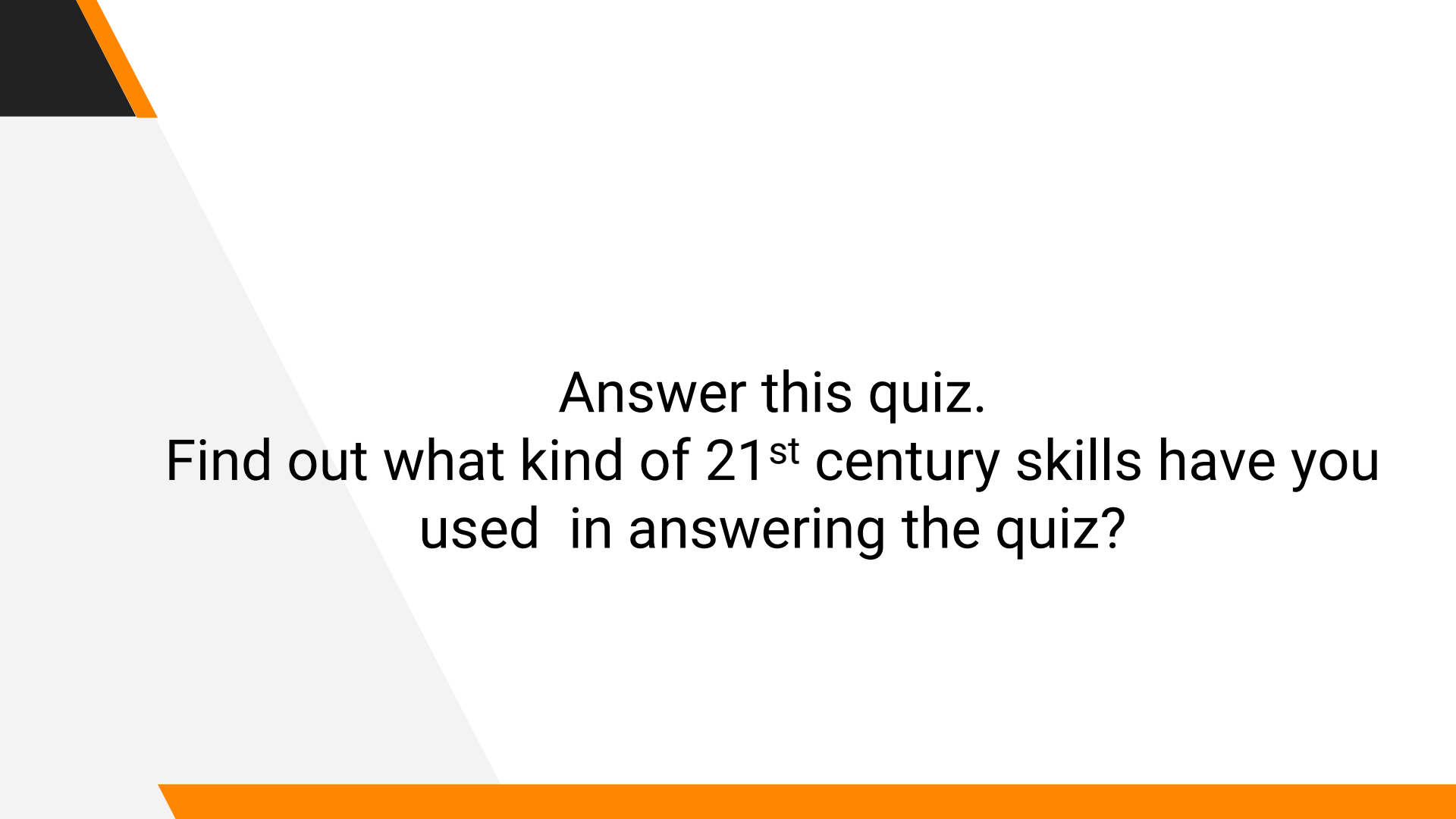
Take your mobile. Use QR application to read the following barcodes. Complete the table.

	Creativity and innovation
	Critical thinking and problem solving
	collaboration
	Responsible citizenship
	communication
	leadership

	
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Critical Thinking Skills & Problem Solving Skills



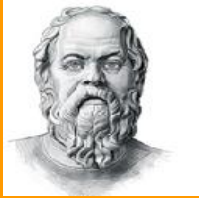


Answer this quiz.
Find out what kind of 21st century skills have you
used in answering the quiz?

Critical thinking skills

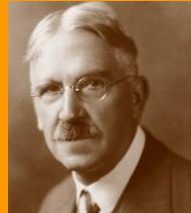


Where did the term originate from?



Socratic questioning
as a system of
enquiry

Reflective thought
as means for learning



What is critical thinking?



Siegel (1988) “the educational cognate of rationality”

Lipman (1991) “healthy skepticism”



Norris & Ennis (1989) “reasonable & reflective thinking”

“It is self-guided, self-disciplined thinking which attempts to reason at the highest level of quality in a fair-minded way. People who think critically consistently attempt to live rationally, reasonably, empathically.”

Why teach critical thinking in ELT context?

1

Meaningful and authentic interaction and communication
(language and thinking skills are interwoven)



2

Intercultural understanding / understanding similarities and differences between L1 and L2



3

Transfer of knowledge to real life situations



Why teach critical thinking in ELT context?

4

Needed for “critical literacy”; i.e ,students need to “evaluate documents..etc



5

Acknowledge students' sense of individuality



6

Builds successful and creative learners/ Boost students' self-esteem and self-importance



Why teach critical thinking in ELT context?

7

Needed for exam preparation



8

Needed for future occupations

Being a Critical Thinker

Ask Questions

- Ask questions that don't have one right answer
- Use Bloom's Taxonomy questions

Work in Groups

- Understand how others think and feel
- Recall in your own words



Make Decisions

- Have an opinion based on evidence
- Make connections
- Observe and draw conclusions

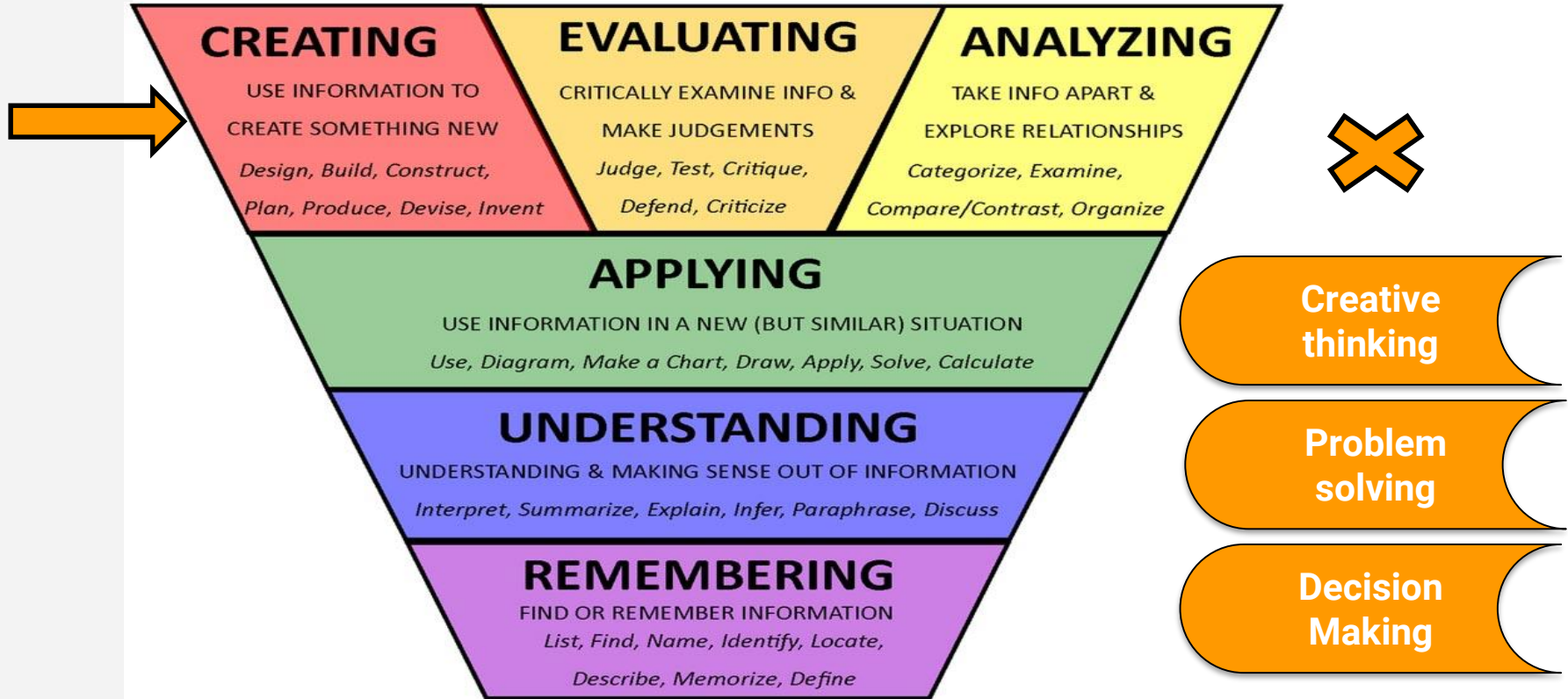
Categorize and Classify

- Sort according to rules
- Find differences and similarities

Brainstorm

- Look for opportunities to brainstorm
- Brainstorm ideas and solutions

Sub-skills of critical thinking (Bloom's taxonomy)



Criteria for effective tasks

Activate existing knowledge

Emotionally and cognitively involving

Feedback provision

Variety, continuity and practice

In order to adopt critical thinking model, we need:

1. *content* { authentic and real-life related topics }

2. *Asking the right questions* { Age appropriate/relevant/
open-ended }

3. *Teachers* {
Critical thinkers
Able to step back
Respect individuality and
opinions }

Paul-Elder Critical Thinking Model


Intellectual Standards

Accuracy	Precision
Clarity	Depth
Relevance	Significance
Logical	Fairness
Sufficiency	Breadth

Intellectual Traits

Humility	Perseverance
Autonomy	Empathy
Fair-mindedness	Integrity
Courage	Confidence in reasoning

Must be applied
to



Elements of Reasoning

Purposes	Inferences
Questions	Concepts
Points of view	Implications
Information	Assumptions

to develop



Critical Thinking Activities

Questioning techniques, discussions and debates, predictions, [argument mapping](#), making judgements (fact or opinion/ True or False) ,Watch-Think-Write, remaking a video, jigsaws and Socratic seminars (fishbowl).



Argument Mapping

Donald Trump will be the 45th President of the United States

Reason:
The rival candidate, Hillary Clinton, is losing momentum.

Objection:
Trump is very unpopular with women and minorities.

Supporting
(Sub-)
Argument

Opposing
(Sub-)
Argument

Supporting
(Sub-)
Argument

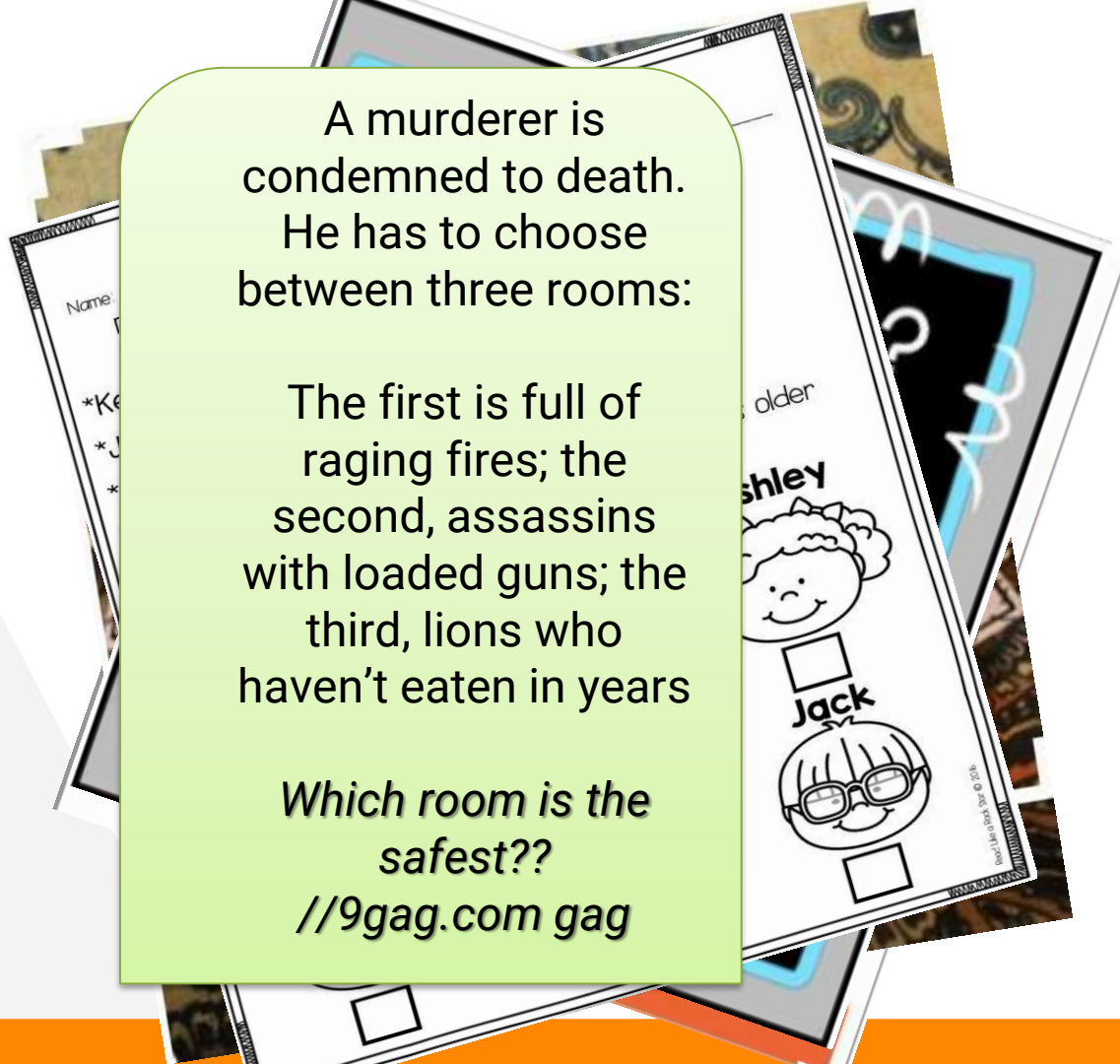
Opposing
(Sub-)
Argument

A murderer is
condemned to death.
He has to choose
between three rooms:

The first is full of
raging fires; the
second, assassins
with loaded guns; the
third, lions who
haven't eaten in years

*Which room is the
safest??*

//9gag.com gag



Technology and Critical Thinking

- ▶ **News judgment** ([www. Factitious.augamestudio.com](http://www.Factitious.augamestudio.com))
- ▶ **AnswerGarden** (<http://answergarden.ch/>) for brainstorming
- ▶ **Socrative** (<http://www.socrative.com/>) (posing questions)
- ▶ **Backchannel Chat : Live Chat for Classrooms** (<http://backchannelchat.com/>)
- ▶ Remix videos using **MEDIA BREAKER**.

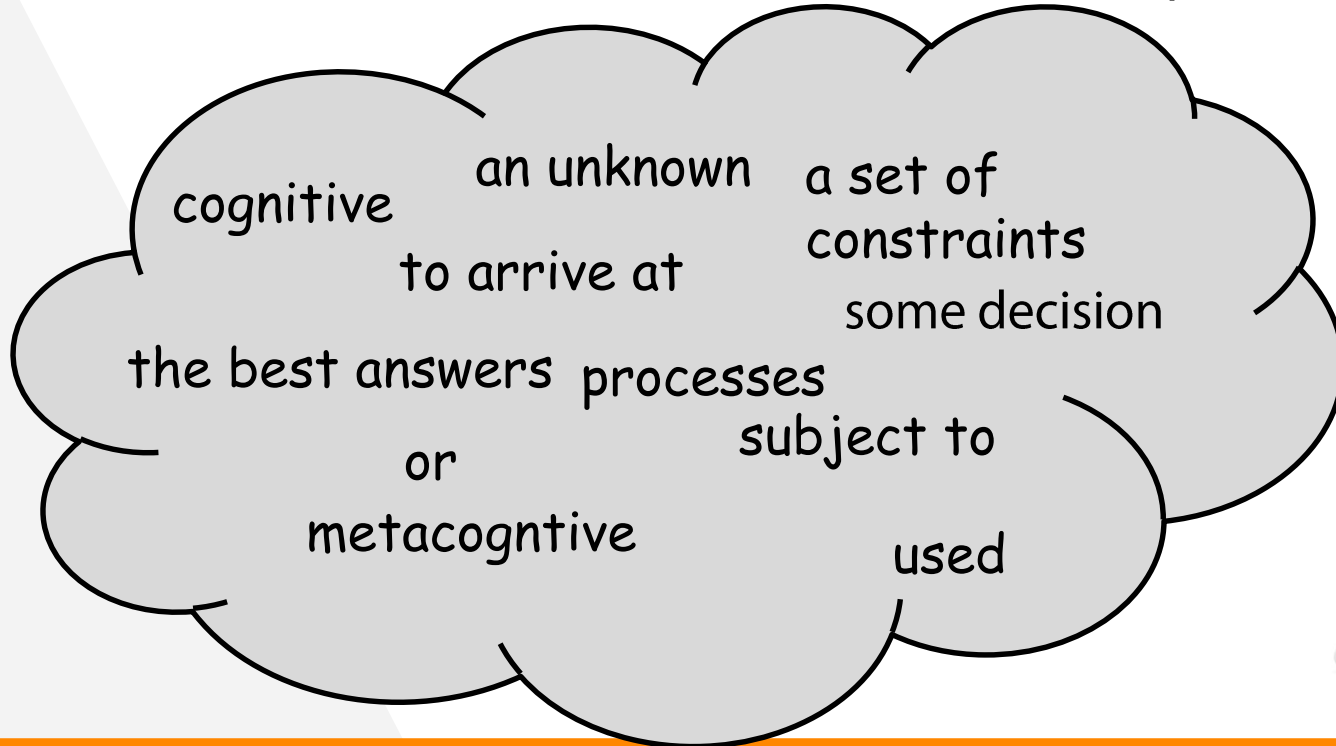


Problem Solving Skills



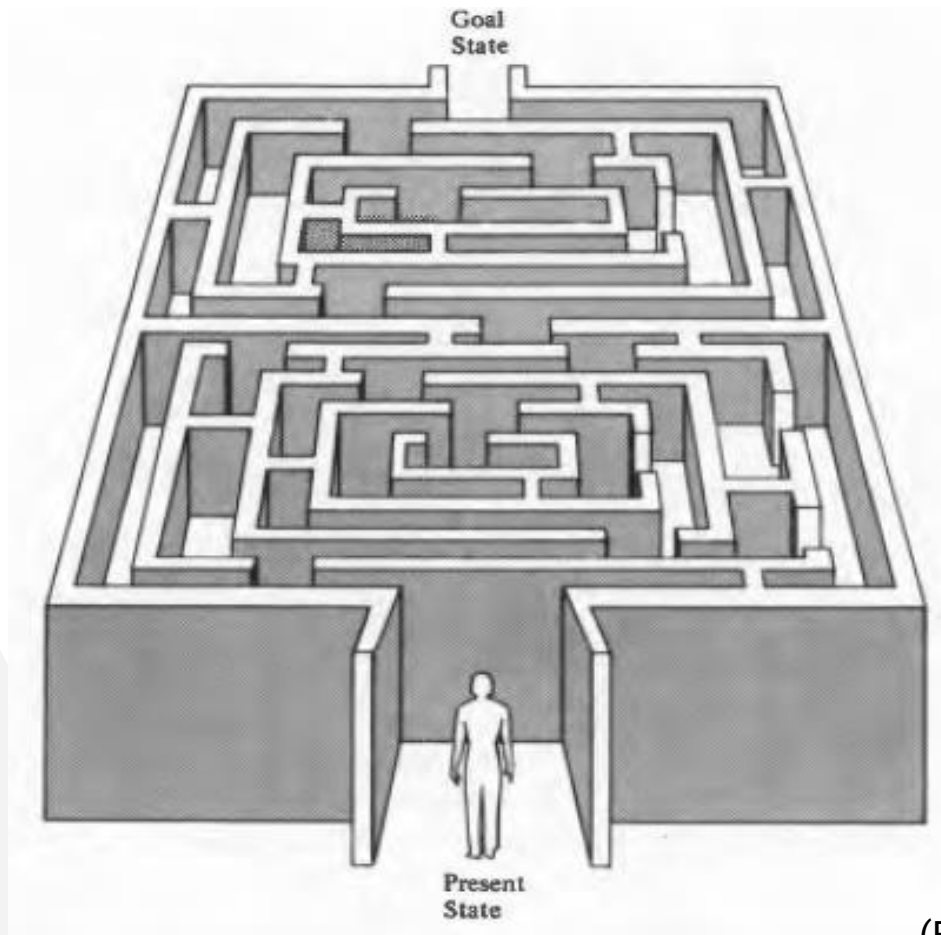
Task

Use the words in the word cloud to make a definition of problem solving skills

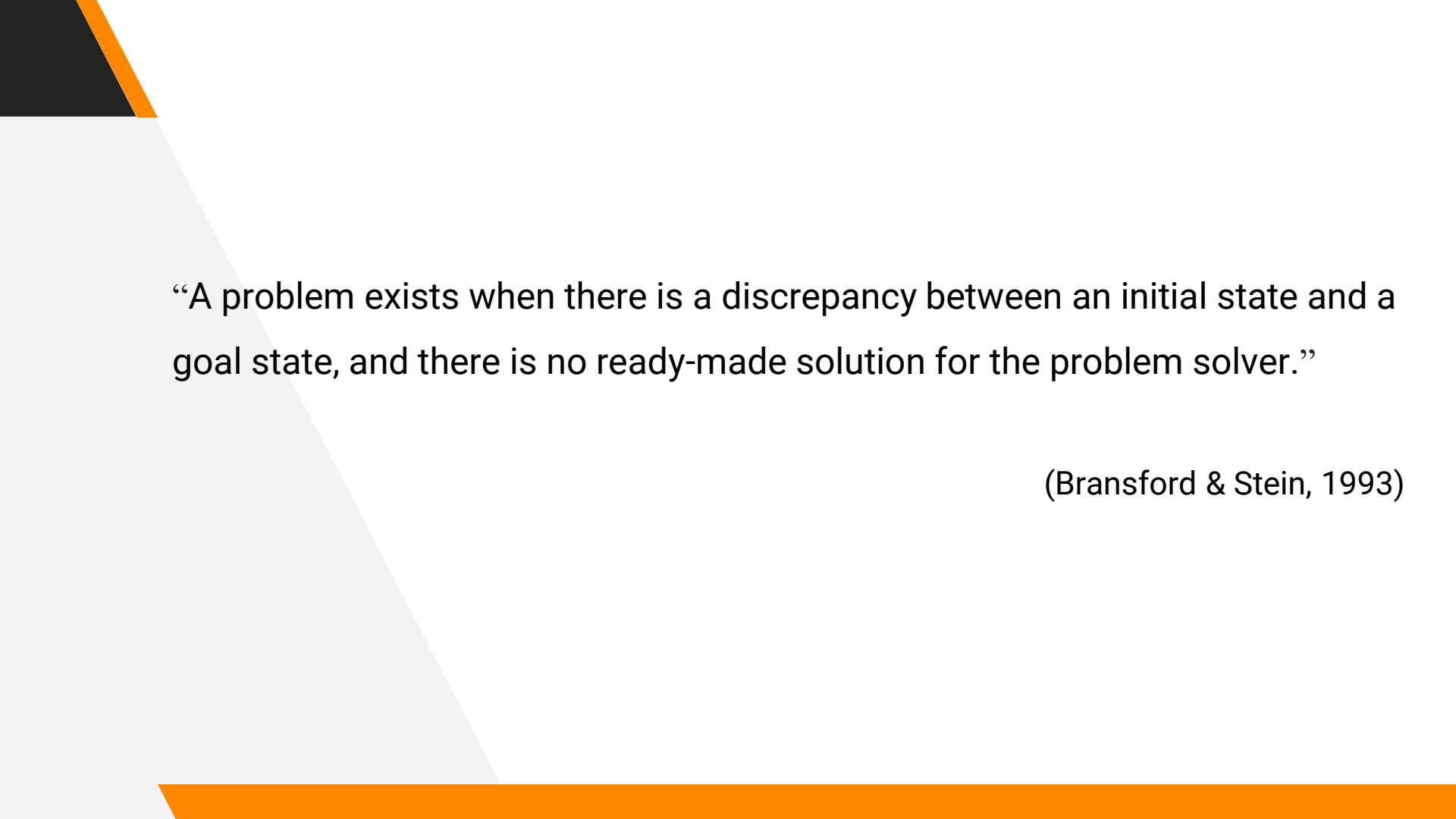


“Cognitive and metacognitive mental processes used to arrive at the best answers to an unknown or some decision, subject to a set of constraints”

(Woods, 1979)



(Bransford & Stein, 1993)



“A problem exists when there is a discrepancy between an initial state and a goal state, and there is no ready-made solution for the problem solver.”

(Bransford & Stein, 1993)

Types of Problems

Ill-
structured

Well-
structured

Ill-structured problems:

problem is not well specified or clearly described, and the information needed to solve it is not entirely contained in the problem statement

- *Bridging the gap between high schools and HEIs*
- *Predicting the effects of a new curriculum*
- *Causes and solutions of students low proficiency level*

Well-structured problems:

problem is well designed to yield a right answer through the application of some rules or previous knowledge

- Word puzzles and crosswords
- Algebra problems
- Information gap activities

Ill-structured Vs. Well-structured Problems

Complex: intricate givens

Simple: guided clear givens

... rarely have any single, correct or agreed-upon solutions

A transformation problem, which has a clear initial goal state, a known goal state, and a constrained set of rules to transform the initial situation into the goal

A reasonable solution is one that fits with current knowledge or that takes into consideration opposing perspectives

Have single solutions, optimal solution paths, and structured goals, and demand a logical inquiry system

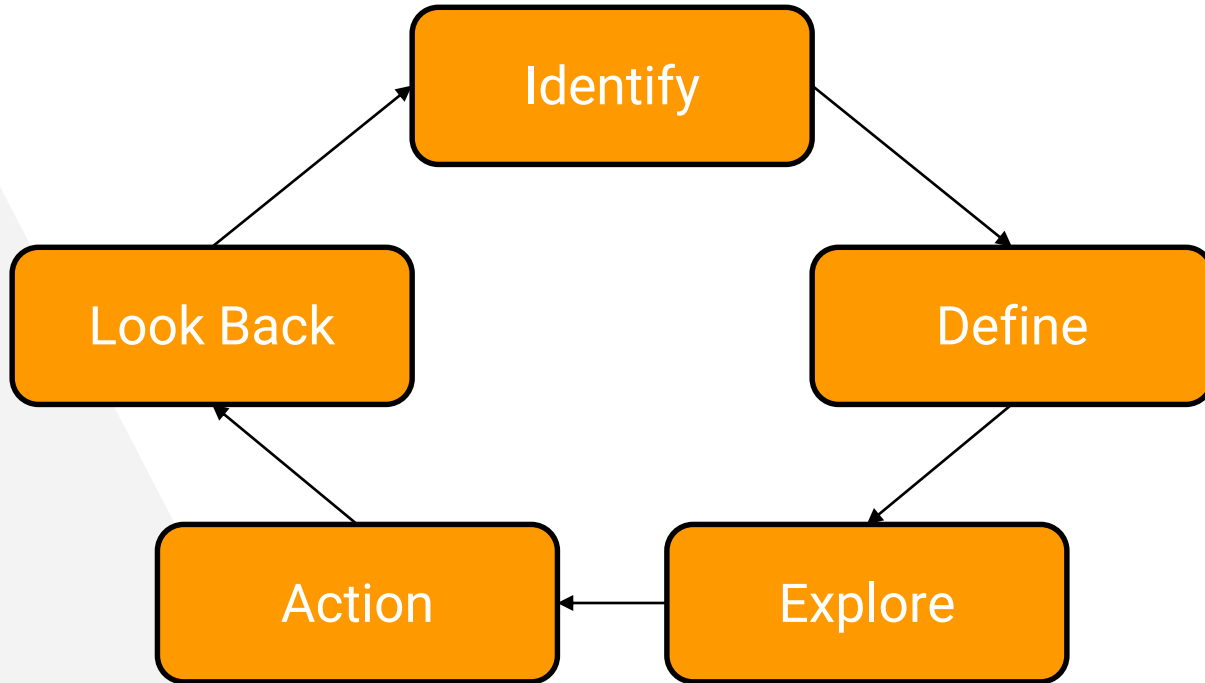
Always a mixture of low level thinking skills and high order thinking skills

Mostly low level thinking skills

Barriers to problem solving

- ▶ Failure to recognize and identify the problem
- ▶ Failure to identify the context of the problem
- ▶ Failure to consider all aspects of the problem
- ▶ Failure to reflect on the solution
- ▶ Failure to evaluate the solution
- ▶ Failure to collaborate with others

IDEAL: Problem Solving Model



(Bransford & Stein, 1993)

Problem Solving Scaffolding Models

- ▶ Many scaffolding models
- ▶ ... to facilitate both cognitive and metacognitive processes
- ▶ ... to support students to activate schemata
- ▶ ... to organize and retrieve knowledge
- ▶ ... monitor and evaluate, and reflect on their learning

(Antonenko, Jahanzad, & Greenwood, 2014; Xun & Land, 2004)

Types of Scaffolding

Hard

Static supports

Soft

Dynamic and situational support

Scaffolding Models

DEEPER Model

Question Prompts

Peer Interaction

Concept Maps

DEEPER Scaffolding Model

1. Define

Identify the problem; activate prior knowledge, outlining causes and effects.

2. Explore

Maintaining learning goals, tagging information resources, differentiate between relevant and irrelevant information, extracting evidence.

3. Explain

Develop arguments for solutions, determine the best solution, explain the solution.

4. Evaluate

Evaluate the effectiveness of problem-solving process

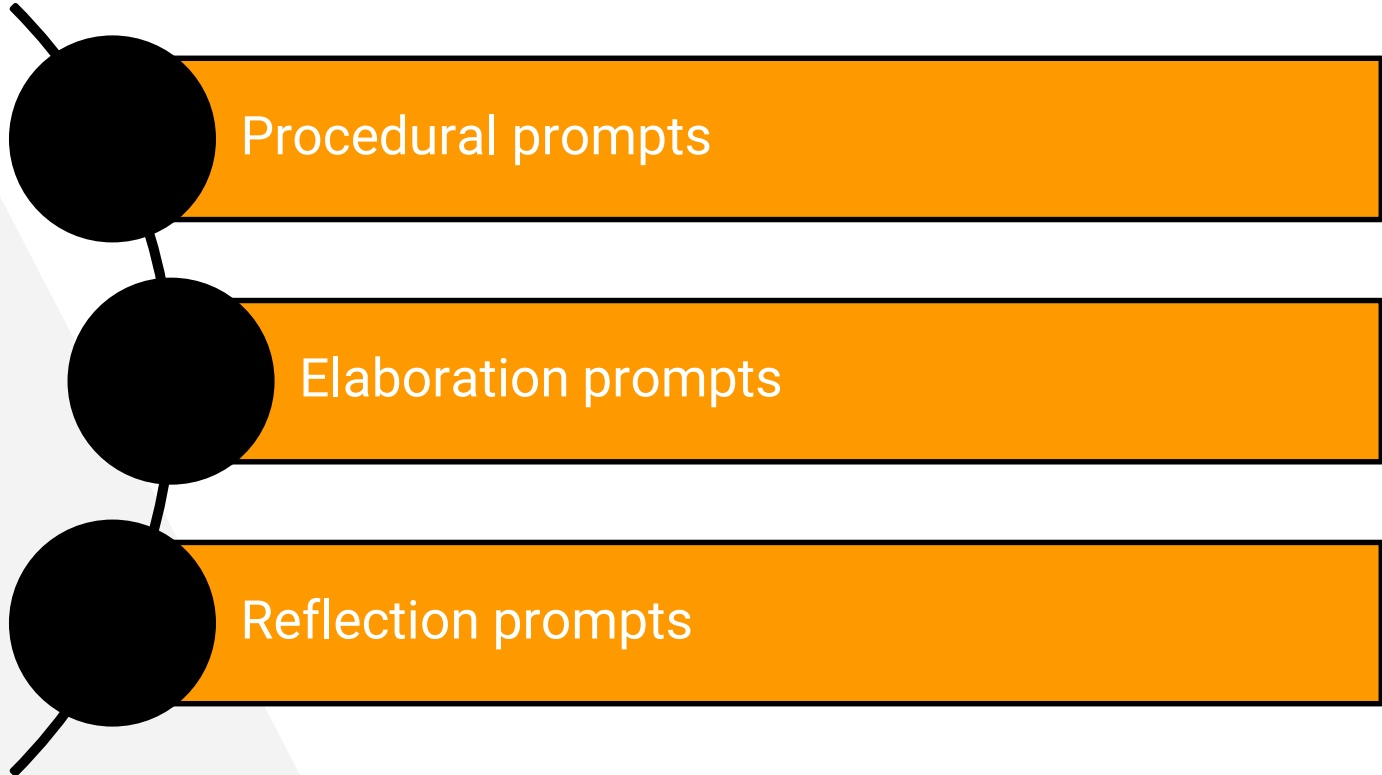
5. Reflect

Reflect on the experience, revising the problem-solving process

Question Prompts & Peer Interaction

- ▶ ... theoretically and empirically based on previous research findings
- ▶ ... practical from an instructional perspective because question prompting is a common classroom practice and peer interaction is a form of collaboration that can be implemented easily in most classrooms
- ▶ ... social constructivist perspectives, peers mediate each other's learning through effective dialogue, such as asking questions and providing explanations

Question Prompts



Quest

... designed to help learners complete specific tasks

Examples

An example of this . . . ,

Another reason that is good

Procedural prompts

Q

...designed to prompt learners to articulate thoughts and elicit explanations

Examples:

What is a new example of ...?

Why is it important?

How does ... affect ...?

Elaboration prompts

Quest

encourage reflection on a metalevel that students do not generally consider

Example:

To do a good job on this project,
we need to . . .

Reflection prompts

Problem Solving Teaching Tools

Questioning Patterns

Concept
Maps/diagramming

Six Thinking Hats

SWOT Analysis

Six Thinking Hats



Six Thinking Hats

- ▶ Dr Edward De Bono
- ▶ “Simple methods used effectively are more valuable than complicated methods that are difficult to understand and confusing to use”
- ▶ Three main difficulties:
 1. Emotions: rely on instant gut feeling, emotion and prejudice as a basis for action
 2. Helplessness: react with feelings of inadequacy
 3. Confusion: keep everything in mind at once, with a mess as a result

(Kivunja, 2015)

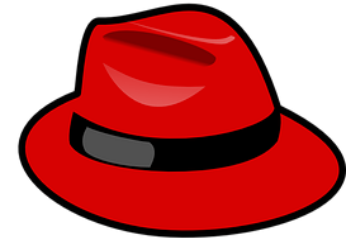
Six Thinking Hats







- ▶ ... Enables the wearer to bring a different perspective to thinking critically about an issue and to trying to find alternative solutions to any problem confronted.
- ▶ ... allows us to use emotions and feelings at the right place.
- ▶ ... provides us with a basic framework for thinking actions.
- ▶ ... allows us to take one direction at a time.

(Kivunja, 2015)



Six Thinking Hats



Bloom's Taxonomy		Thinking Hat	Thinking Applied
Creating		Creating new ideas or products: What new ideas are possible? What is my suggestion? Can I create something new?	
Evaluating		Justifying decisions: Where are we now?, what is the next step? What thinking is needed? Should we reconsider something again?	
Analyzing		Breaking information into parts to explore understanding and relations: What is wrong about this?, Will this work? Is it safe?	
Applying		Using the information in another familiar situations: what are the good points?, Why can this be done?	
Understanding		Explaining ideas and concepts: How do I feel about this? What do I like about the idea?	
Remembering		Recalling Information: What information do I have?, What are the facts? What information do I need?	

How to integrate six thinking hats in the class

An orange circle with a black outline containing the text "Occasional Use".

Occasional
Use

An orange circle with a black outline containing the text "Sequence Use".

Sequence
Use

(Kivunja, 2015)

Occasional Use

1. Blue/Green: to provide alternative and summarize them
2. Black/Green: to improve an existing idea
3. White/Green: to generate ideas
4. Yellow/Black/Red: Quick assessment
5. Blue/Yellow: any alternatives?
6. Red: problems, feelings caused by a certain problem
7. Blue: summarizing a complicated issue for further investigation

(Kivunja, 2015)

Sequence Use

1. Seeking an Idea:

1. White: gather available information
2. Green: explain and generate alternatives
3. Yellow: asses the benefits and feasibility of each alternative
4. Black: asses the weakness of each alternative
5. Green: further develop the most promising alternatives and make a choice
6. Blue: summarize and asses what has been achieved so far
7. Black: make the final judgment on the chosen alternatives
8. Red: Find out the feelings on the outcome

(Kivunja, 2015)

Sequence Use

2. Reacting to a presented idea:

1. Red: find out the existing feelings about the idea.
2. Yellow: find out the benefits in the idea.
3. Black: point out the weaknesses, problems and dangers in the idea.
4. Green: see if the idea can be modified to strengthen they yellow-hat benefits and to overcome the black-hat problems.
5. White: see if available information can help in modifying the idea to make it more acceptable.
6. Green: develop the final suggestion
7. Black: judge the final suggestion
8. Red: find out the feeling on the outcome

(Kivunja, 2015)

Sequence Use

3. Comparing fact and opinion

- ▶ **Red:** opinions
- ▶ **White:** facts

(Kivunja, 2015)

Textbooks Analysis

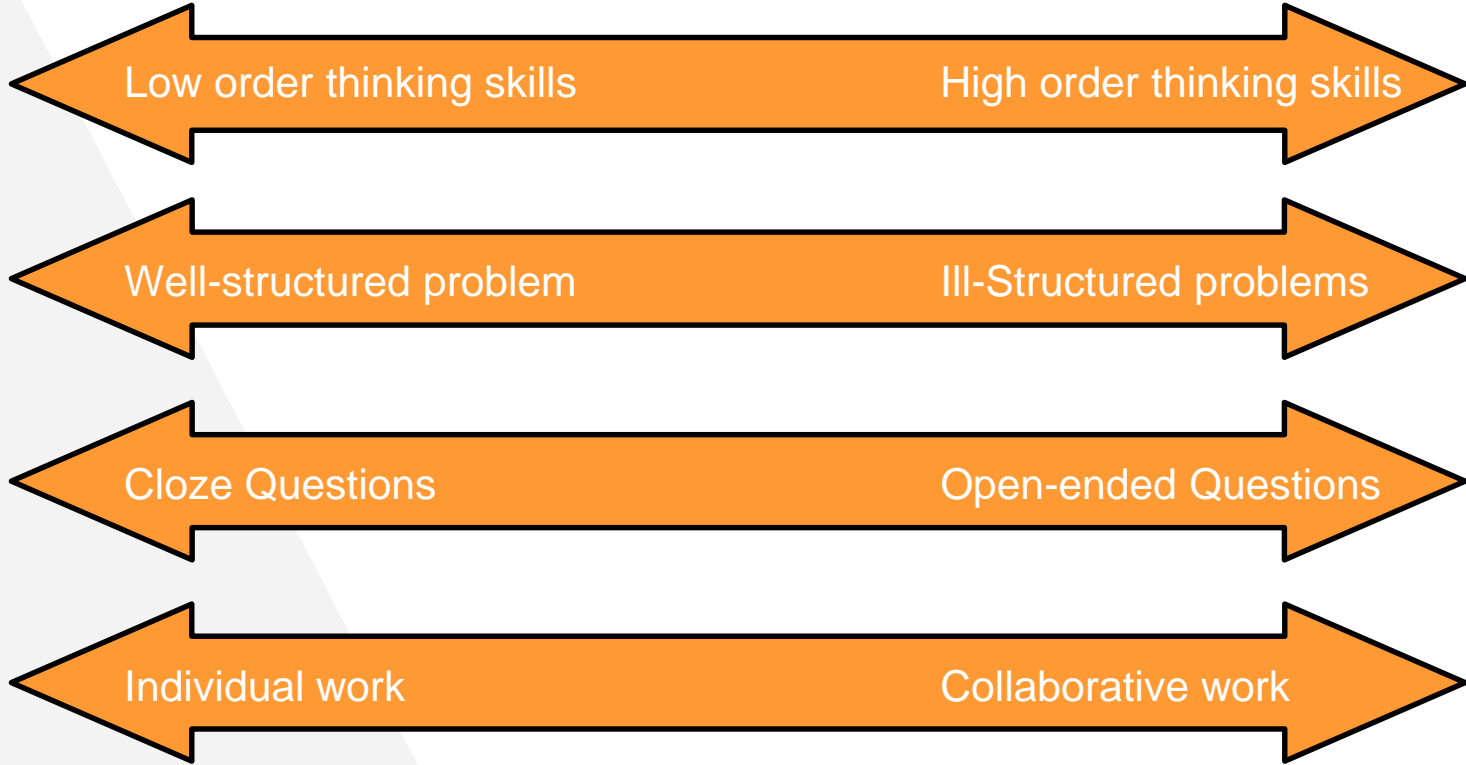


Textbook Analysis Activity

- ▶ Spot the integration of 21st century skills (critical thinking and problem solving) in these textbooks.
- ▶ How can you adapt the materials to integrate 21st century skills, if they are not included?



Textbook Analysis Activity



Teacher's Role Vs. Student's Role





21st Century Teacher

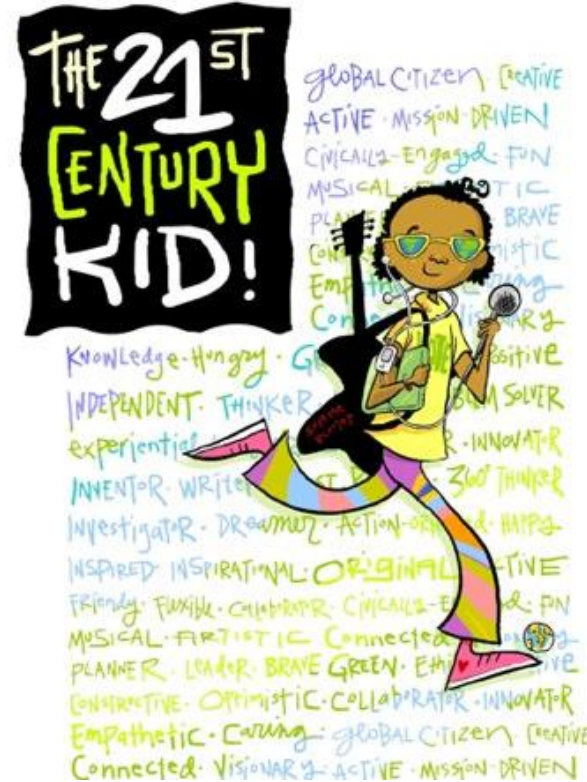
The 21st Century Teacher

- ▶ Facilitator
- ▶ Leader
- ▶ Creative
- ▶ Flexible
- ▶ Computer savvy
- ▶ High-tech
- ▶ Mentor
- ▶ Risk taker
- ▶ Collaborator



The 21st Century Student

- ▶ An innovator
- ▶ A communicator
- ▶ A problem solver
- ▶ A critical thinker
- ▶ Collaborator
- ▶ A leader
- ▶ Information/ media literate
- ▶ Financially & economically literate
- ▶ Self-directed learner
- ▶ Civically engaged



Challenges



Challenges of teaching 21st century skills

1. Students' language proficiency level.



Challenges of teaching 21st century skills

2. Exam-led teaching and learning activities



Challenges of teaching 21st century skills

3. Overloaded courses in content and length.



Challenges of teaching 21st century skills

4. Some teachers' reluctance to change their stereotypical teaching methods.



Challenges of teaching 21st century skills

5. Time consuming



Challenges of teaching 21st century skills

7. Lack of support by high-rank personnel (authority).



Assessment & Feedback



Assessment

- ▶ Ongoing assessment throughout the various critical thinking/problem-solving activities.
- ▶ Explicitly stated criteria needed for teachers and students
- ▶ [Criteria for critical thinking assignments](#)
- ▶ [Rubrics for assessing students reasoning abilities](#)
- ▶ Common Rubric for Assessing Critical Thinking and Problem Solving in Problem-Based Learning

Assessment

- ▶ Project-based learning with rubrics promoting the use of higher-order thinking abilities. (Kelly-Riely, 2007)
- ▶ Reflective Writing: review, analyze and evaluate a situation (Carter, Creedy, & Sidebotham, 2017)
- ▶ Open-Book Assessment: more emphasis on thinking and analyzing, activates the process of critical thinking (Johanns, Dinkens, & Moore, 2017)

Assessment

- ▶ Portfolios:
 - ▶ Reflect and analyze what they have learned
 - ▶ Identify what they need to learn
 - ▶ Improve self-directed learning
 - ▶ Critically evaluate their work
 - ▶ Solve problems that hinders some parts of learning
 - ▶ Help teachers know about their students (Azer, 2008)
- ▶ Common Rubric for Assessing Critical Thinking and Problem Solving in Project- Based Learning

Feedback

- ▶ Discussion of student's work should be given during, and after each task
 - ▶ Question prompts
 - ▶ What if?
 - ▶ If I were you, ...
- ▶ Discussion provides mentoring which contributes to learning the skill needed for further tasks (Carges et. al, 2017)
- ▶ Schmidt Noticing Hypothesis: conscious process of focus on form is necessary for learning (Asadi & Gholami, 2014)

Technology Integration

- ▶ Assists teachers in teaching the 21st century skills.
- ▶ Integrates many skills at the same time: critical thinking, problem solving, creativity, collaboration, communication, etc.



Technology Integration

- ▶ Reviewing mobile and internet applications that can be used in teaching the 21st century skills.
- ▶ Simple language and interactive content.
- ▶ 8 chapters



21ST CENTURY SKILLS

A Pocket of Mobile Learning Tools
for Language Teachers



Edited by
Raja Maznah Raja Hussain
Is'haq Al Naibi

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