EDB PDP

Developing Students’ Thinking Skills through Non-Language Arts Elective Modules

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AIMS

• To understand the concept of higher order thinking skills and how to promote these in the non-language arts (NLA) classroom.

• To consider ways of approaching the teaching of generic thinking skills in an integrated way.

• To take part in and reflect on lesson demonstrations that promote an integrative use of generic thinking skills.
SCHEDULE

• Icebreaker and Introduction
• Thinking skills: Illustrations and Exercises
• Practical Demonstration 1 – Social Issues: Plastic Ocean
• Break – 15 minutes
• Practical Demonstration 2 – Sports: Lesson Planning
• Designing Tasks to Promote Holistic Thinking
• Conclusion and Discussion
ICEBREAKER

To what extent do you agree or disagree with the statements? Drag your dot!

- I teach my students thinking skills every day.
- In an English lesson, teaching thinking skills is just as important as teaching language skills.
- Teaching thinking skills implicitly is more effective than teaching thinking skills explicitly.
- My students like learning how to think in an English class.
- My students are good at higher order thinking.
Thinking about Thinking

What is thinking? How would you describe it?
Is thinking ability an inborn ability (like an instinct)?
Is it an automatic behavior (like the heartbeat or reflex)?
Is it more of a skill that needs to be trained (like juggling)?

Q. Think of an appropriate metaphor for thinking.
   A. “Thinking is ________________________________.”
Thinking Skills for NLA English Electives: Holistic Thinking Skills

Let's break it down...

Problem Solving

Critical Thinking

Creativity

“When completing a more complicated learning task, the generic skills are often applied in an integrative manner rather than in isolation.” (ELEKLACG, 2017)
**Problem-solving** involves using various thinking skills to resolve a difficulty. The process includes:

- **investigating** the problem
- **synthesizing** information
- **generating ideas** to determine the best course of action

Learners need to **adjust and evaluate strategies**, as well as **consolidate experience** for knowledge construction.
Problem Solving

Question 1
A bat and ball cost $1.10. The bat costs one dollar more than the ball. How much does the ball cost?

A: ______________________

Question 2
How many animals of each kind did Adam take onto the Ark?

A: ______________________
Problem Solving

Teaching Problem Solving Skills:

1. **Collaboration/Consultation** (Speaking)
2. **Comparison** with similar problems (Experience)
3. **Good guessing/Hypothesising**: brainstorm, evaluate, trial and error (Speaking, Writing)
Creativity is manifested in new ideas, acts, or products. It emerges spontaneously or through a deliberate process. It involves:

- divergent thinking
- convergent thinking
- the integration of general or domain-specific knowledge for a meaningful purpose

Creativity brings about changes or transformations.
Creative Thinking

Task 1

With your groupmates, list as many possible uses as you can for a paperclip. Write them down:

___________________________
___________________________
___________________________
___________________________
___________________________
___________________________
___________________________
___________________________
___________________________

___________________________
Creative Thinking

Task 2

Label the different uses:

- most common
- most surprising
- most original
- most important
- most interesting
- most humorous
- most ______________
Creative Thinking

Teaching Creative Thinking Skills:

1. Approach questions and problems indirectly (lateral thinking)
2. Give time and space for thinking different (slow thinking)
3. Generate as many answers as possible (divergent thinking)
4. Compare answers to label, weigh & agree (convergent thinking)
Critical Thinking Skills

Critical thinking involves:

- drawing out meaning from available claims, data or ideas
- examining their accuracy
- questioning their credibility

Critical thinking assists students in evaluating arguments and establishing their own views.
Task: Silent Discussion

Consider the following question carefully for 2 minutes:

Children should not be allowed to have mobile phones until they are 16 years old.

1. What is your opinion? Write it in one sentence on a Post-it.
2. Choose a person from the list that may have a different point of view. Write a sentence for that person on another Post-it.
3. Place the Post-its on the card as instructed.
Critical Thinking

Teaching Critical Thinking Skills

Teachers and students:

1. Ask and answer higher order thinking (HOT) questions (speaking and listening)

2. Consider and determine all relevant context issues (research, speaking and writing)

3. Clarify complementary and contradictory information (consultation, discussion, note-taking)

4. Synthesizing diverse points (speaking and writing)
Asking Questions

This essential teaching skill can be used to help students climb the steps of higher order thinking.
Bloom’s Taxonomy

Create:

Evaluate:

Analyze:

Apply:

Understand:

Remember:
Bloom’s Taxonomy

Create
Can you think of a better way to write this scene or the ending of the story (e.g. the consequences of the meeting)?

Evaluate
What are the strengths and weaknesses of this scene?

Analyze
How was this meeting different from their usual meetings?

Apply
What would you do in the same situation?

Understand
Why did the characters want to meet?

Remember
When did the characters meet? Where did they go?
Examples

• Explore a social issue such as pollution: debate the issue

• Explore sport as a social issue: write an article/do a survey/write a survey report

• Explore social issues in the workplace: debate the issue

• Research an organisation focused on a specific social, athletic or workplace issue (e.g. NGOs, charities)
<table>
<thead>
<tr>
<th><strong>SUMMARY: Planning Learning Activities for NLAs Lessons</strong></th>
<th><strong>Generic Skill</strong></th>
</tr>
</thead>
<tbody>
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SPEEDY REFERENCE FOR INTEGRATING THINKING ACTIVITIES

The following activities help students practice one or more specific kind of thinking skill:

- Ask and answer different kinds of questions.
- Take time to generate a variety of responses.
- Listen to and understand different perspectives.
- Carefully consider the merits of different points of view.
- Divide topics or problems into smaller parts.
- Assign a ‘weight’ to the importance of something.
- Determine the value of something.
- Understand how ideas/stories/experiences/information are ‘framed’.
- Allow ‘fun’ or ‘entertaining’ alternatives to be considered.
- Understand and articulate the difference between ‘acceptable’ and ‘correct’.

Practical Demonstration 1 (PD1)

Environmental Issues: Plastic Ocean

(a blend of Social Issues and Debating NLA’s)
Integrating Thinking Skills in NLA’s Lessons: Planning Suggestions

1. **Choose and adapt the topic and materials** according to students language, learning styles, ability and interests.

1. **Focus on fewer meaningful learning objectives** rather than many narrow ones, allowing for clear progression, generic skills development and organic learning opportunities (serendipity)

1. **Focus on language learning objectives** based on the curriculum guidelines, prior learning, cross-curricular content, assessment objectives and the principle of comprehensible input/output

1. **Integrate a balance of problem-solving, critical thinking and creative thinking opportunities** throughout the tasks and activities
Plastic pollution

Aims

• To understand the issue of plastic waste.
• To explore the issue through research and propose some ideas/solutions.
• To express personal opinions.
• To take part in a mini debate around the issue.
Plastic pollution

**Approach**

**Critical-thinking skills**
Asking questions, exploring issues, identifying main ideas and clarifying information.

**Creativity**
Brainstorming, generating ideas and fine tuning decisions.

**Critical-thinking and Problem Solving Skills**
Comparing options and solutions, considering from multiple perspectives, developing a plan of action, evaluating and reflecting on the completed task.
Lead-in discussion

Which products do you regularly use that are made of plastic?

How do you dispose of the plastic that you use?

Do you know what happens to the plastic you throw away? What?

If you don’t know, make an educated guess.
Plastic pollution

Key Vocabulary

Match the vocabulary with the correct definition and write a–h next to the numbers 1–8.

1. crisis        a. an area where waste is buried under the ground
2. to degrade    b. a small part of something
3. a landfill site c. a difficult or dangerous situation that needs urgent attention
4. to dump       d. a diver who holds their breath under water
5. to endure     e. in perfect condition
6. a free diver  f. to get rid of something quickly without worrying about it
7. a fraction of something g. to suffer
8. pristine      h. to break down into smaller substances
Plastic pollution

First Viewing – **Comprehension Task**

**Question:** What is the significance of these numbers?

- 11__________?
- 80 to 90%____________________?
- (Identify another number) ________________?
Plastic Ocean

Second Viewing – **Language Focus**

Language Questions: What language is used to state opinions?

- *We’ve got to* go out there and clean this thing up.
- *Then why don’t we* call it what it is?
- *It’s not just that gyre of plastic that I was concerned about. I'm also concerned about* the plastic in the refrigerator, *and I'm concerned about* the plastic and the toxins that leach from plastic into us and into our bodies.
- *So this is a big issue for us.*
- *… this is a huge problem in the oceans, but this is a problem we’ve created as consumers and we can solve.*
Plastic Ocean

**Research Phase – Critical Thinking**

**Headlines:**

Hong Kong searches for a culprit as garbage piles high on beaches

What a mess: Hong Kong to discuss rubbish deluge with Guangdong authorities

Hong Kong school children urge McDonalds to stop serving drinks in plastic bags

400 syringes, 200 drug phials: the medical waste plaguing Lantau beach next to Hong Kong Disneyland
Plastic Ocean

**Research Phase – Critical Thinking**

Video from Sky news (January 31\textsuperscript{st} 2017):

Video from SCMP (August 28\textsuperscript{th} 2018):
The World Is Blue: How Our Fate and the Ocean's Are One

by Sylvia A. Earle

1. Studying the book cover
   - Describing visuals
   - Studying title, subtitle, author, awards received, blurbs, etc.
   - Speculating book content

2. Reading quotes from the book
   - Comprehension check: matching
   - Responding to quotes
   - Choosing quotes that resonate with them
   - Vocabulary-building
“People ask: Why should I care about the ocean? Because the ocean is the **cornerstone** of earth’s life support system, it shapes climate and weather. It holds most of life on earth. 97% of earth's water is there.”

“The single **non-negotiable** thing life requires is water.”

“Let’s talk **trash**.... Only we humans make waste that nature can’t **digest.”**

“One kind of blue-green bacteria, Prochlorococcus, is so **abundant**...that it alone is responsible for about 20 percent of the oxygen in the atmosphere. This nearly invisible form of life generates the oxygen in one of every five breaths you take, no matter where on the planet you live.”

“We still have a really good chance to make things better than they are. They won't get better unless we take the action and **inspire** others to do the same thing. No one is without power. Everybody has the **capacity** to do something.”
Plastic Ocean

What can be done? Problem-solving

We need....  Why don’t we.....
We have to....  We should....
We ought to....  We could.....

- Language items and communicative functions
- Modals to make suggestions and proposals
Plastic Ocean

Rank the following solutions - Evaluating
Consider the criteria you will use for your decisions.

A. Collect the plastic and make artworks out of it.
B. Urge companies to use recycled plastic e.g. Watsons water.
C. Coordinate government action between Hong Kong and China.
D. Set up a special ‘Trash Police’ that can fine on the spot.
E. Start a campaign to limit single use plastic items.
Plastic Ocean
Consider different perspectives/Evaluate

Different perspectives
How might these people react if the solutions are implemented, or not implemented?
Plastic Ocean

Presenting your ideas - Consolidating Experience

Solution
Considering the scale of the problem, we feel that...

Reason
We think that this is the best option because...

Impact
As a result we think this will lead to.....
Debate

This house believes that in order to save the ocean from further plastic pollution, there should be a ban on single-use plastic items.
Plastic Ocean

Approach recap

Critical-thinking skills

Asking questions, exploring issues, identifying main ideas and clarifying information.

Creativity

Brainstorming, generating ideas and fine tuning decisions.

Critical-thinking and Problem Solving Skills

Comparing options and solutions, considering from multiple perspectives, developing a plan of action, evaluating and reflecting on the completed task.
Plastic Ocean

Reflection Questions

1. Which language skills did the lesson develop?

2. How did this lesson develop holistic thinking skills?

3. What other impacts on learning does the lesson have?
Practical Demonstration 2 (PD2)

Sports: Lesson Planning Activity

(Blending Sports Communication with other NLA’s + Generic Skills)
Sports Lessons

Possible Aims

• To discuss the value of winning and losing in sports competition, including students’ own experience and ideas.

• To research and introduce an obscure sport (e.g., dog sledding, fencing, curling, wrestling, etc.)

• To conduct a survey of students about which new sports should be introduced in school (or other sports-related topic)

• To analyse, organize and present the survey results in a report/article.
Sports Lessons

Approaches

Critical-thinking skills
Asking questions, exploring issues, identifying main ideas and clarifying information, considering from multiple perspectives.

Creativity
Brainstorming, generating ideas and fine tuning decisions.

Critical Thinking and Problem Solving Skills
Developing a plan of action, evaluating data and reflecting on the completed task.
Sports Lessons
Suggest activities that can integrate objectives from the compulsory part of the curriculum, NLA’s and some higher thinking skills. For example:

- Meaningful sports topic
- Sports Vocabulary
- Language skills focus
- Relevant text type or discourse type focus
- Problem-solving, Critical thinking and/or Creative thinking skills
Sports Lessons: Motivating Content

Read *The Guardian* review for the Netflix series “Losers”

Winners are boring! The genius Netflix doc that celebrates losers

Watch the trailer for “Losers”

Suggest a reading/writing OR a listening/speaking activity that incorporates:

- sports vocabulary; language skills; a specific text type and 1. problem solving;
- 2. creative thinking; or 3. critical thinking activities.
Watch the trailer for “Zion”

Summarize the trailer.

What ‘life lessons’ can sports competition teach us? As participants? As observers?

How does sport help us to overcome adversity?

Is winning the most important purpose of competition? Explain.
Workshop: Designing NLA Lessons

Some steps to develop students’ thinking skills

1. Think about the questions you would ask the students. What questions would you ask to promote HOT?
2. How would you scaffold the lesson(s) to progress from: motivation to comprehensible input to language learning and thinking practice?
3. What resources would you use? How would you use these?
4. What materials would you need to make?
5. How much time would you give the students to complete each section/lesson?
6. What are strategies for balancing learning and practice time with adequate progress in covering the curriculum?
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## Integrating Generic Thinking Skills: Sample Suggested Activities

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<td><strong>brainstorm as many solutions as possible</strong> to the problem of physical inactivity among students, including unconventional solutions and new possibilities;</td>
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<td><strong>discuss and compare</strong> the cost and benefit of each brainstormed solution from multiple perspectives;</td>
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<td><strong>evaluate and rate</strong> the possible solutions based on their feasibility and effectiveness and <strong>select</strong> one best solution for students of your school;</td>
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<td><strong>research</strong> on the Internet and <strong>collect information</strong> about obscure sports from different sources (e.g. reports from Olympic journalists, websites of sports organizations and informational articles).</td>
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<td><strong>select</strong> three obscure sports and <strong>identify</strong> the different skills required to succeed in each;</td>
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<td><strong>organise and synthesise</strong> the information using a graphic organiser, such as a fishbone or spider diagram;</td>
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<td><strong>predict the students’ reactions</strong> to the survey questions;</td>
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<td><strong>prepare recommendations to the principal based on survey results</strong> anticipating problems arising from diverse opinion and other obstacles.</td>
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Thinking Skills for NLA
English Electives:
Integrating NLA’s and Thinking Skills

CRITICAL THINKING

1. Debate the value of sports
2. Discuss the social value of sport (e.g., international awareness)

PROBLEM SOLVING

1. Research sports-related employment opportunities
2. Design environmentally conscious employment ideas

CREATIVITY

1. Debate current events/social issues
2. Debate work-related topics (e.g., a four-day work week)

SOCIAL ISSUES

1. Read and present new social issues
2. Design awareness raising campaigns for volunteer organizations (Food Angel, Habitat for Humanity, etc.)

SPORTS COMMUNICATION

1. Debate the value of sports
2. Discuss the social value of sport (e.g., international awareness)

DEBATING

1. Debate current events/social issues
2. Debate work-related topics (e.g., a four-day work week)

WORKPLACE COMMUNICATION

1. Research sports-related employment opportunities
2. Design environmentally conscious employment ideas
Takeaways

Discussion

- Can you share ways that your school integrates thinking skills in NLA’s?
- What new ideas/information from today’s workshop will be useful?
- Do you foresee any challenges or obstacles in integrating thinking skills and other generic skills in NLA’s?
- What more information or resources do you need?
Thank you for participating!

Any follow up questions or comments?

Please contact me at: ttaylor@eduhk.hk

Or call me on: 2948 7228
References

Curriculum Documents
http://www.edb.gov.hk/elecg

English Language Education Key Learning Area Curriculum Guide (Primary 1-Secondary 6) 2017

CDC-HKEAA English Language Curriculum and Assessment Guide (Secondary 4 - 6) 2007 *[with updates in November 2015]*
References

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News Articles – Plastic waste
http://hongkong.coconuts.co/2015/03/25/hong-kong-schoolchildren-urge-mcdonalds-stop-serving-drinks-plastic-bags


Losers Trailer and Review
https://www.youtube.com/watch?v=909qosDbaIU


EDB Assessment for Learning Workshop: QUESTIONS