

## CHAPTER 10

# Heads and Tails for Enhancing Students' Critical Thinking Skills

*Indra Odina*

### INTRODUCTION

The outlook towards education has changed over the last few years. Furthermore, the variables and dynamics in education have also consistently demonstrated sustainable evolution. For this reason, the need to keep up with the latest changes in education and adaptation to those changes can be inevitably regarded as a must. One of the aspects that needs improvement is the students' critical thinking skills. Critical thinking is a key characteristic that every student is supposed to have, through which they conceptualize, analyse, synthesize, and evaluate the inputs they encounter during the classes. Therefore, the tools and activities have to address and develop the secondary school students' critical thinking skills. For that matter, "Heads and Tails" serves as a dynamic and functional tool for enhancing students' critical thinking skills.

### THEORETICAL BACKGROUND

The tool "Heads and Tails" is based on reflection theory and experiential learning where experience is considered to be the main advantage. "Experience is a meaningful engagement with the environment in which we use our previous knowledge (itself built from experience) to bring new meaning to an interaction" (Beard and Wilson 2006: 21).

Experiential activities often start with specific narrow skills and then move on to broad skills such as teamwork, communication, time management, emotional intelligence, or leadership. Beard and Wilson (2006) consider this simple framework can be created both to classify outdoor and indoor experiential learning programmes and to show the sequencing of activities from play to intense self-development over the period of a programme.

"Narrow skills such as listening, or questioning can be focused on first. These might be built on later, as they are a subset of skills for teamwork or communication, which are very broad skills" (Beard and Wilson 2006: 120).

According to Beard and Wilson (2006), the following four-stage sequence or activity wave can be distinguished:

1. “Awaken participants’ enthusiasm;
2. Start to focus attention with medium-sized activities and narrow skills;
3. Direct the personal experience with broader skills;
4. Share participants’ enthusiasm using regular reviewing activities” (Beard and Wilson 2006: 121).

Using this tool, besides critical thinking skills, the students develop their reflection skills, support their arguments, and can give structured meaningful feedback evaluating the event that took place, learning process or what they like about school / activity / assignment and so on. In conclusion, this tool is designed to advance secondary school students’ critical thinking skills through the idea that there is no completely positive or negative thing in any point.

### **EXPLANATION OF THE TOOL**

“Heads and Tails” is based on reflection theory and experiential learning, where students internalize the fact that every strength has within it the potential for weakness, and likewise every weakness has within it the potential for strength along with improving debating skills and finding and supporting arguments.

- Aims of the tool – 1) to enhance secondary school students’ critical thinking skills; 2) to develop students’ reflection skills; 3) to prepare for debates, for finding and supporting arguments; 4) to give structured meaningful feedback evaluating the strength or weakness and find the other side.
- Expected outcome – to develop, present and support one’s argument; to get meaningful feedback.
- Allocated time – 20 – 30 minutes
- Setting, place layout – students working stations/ separate tables for groups
- Necessary materials – one set per group (grid for notes, coin) with guidelines
- Number of participants – whole class in small groups of 3-5
- Role of students – critical reflectors
- Role of teacher – active observer
- Steps to use the tool
  1. Make the groups of 3-5 participants, one takes a coin of any nominal value.
  2. One keeps notes in the grid.

Name	Strength	Weakness in strength	Weakness	Strength in weakness

3. In your group agree which side will count as which.



A 10-rupee coin has the three lions' capital on one side, and the number 10 on the other side. The three lions' side is the obverse, so counts as heads.

If you need to toss a coin, it really does not matter – just agree before you toss which side will count as which.

- The coin owner tosses the coin first. If the coin lands on the head (number) – tells about the strength, something he/she likes about the event that took place, or in the learning process or what they like about school.
- And then describes “the other side of the coin” – what is the drawback still in the thing that he/she likes.

e.g., Strength: *I liked how I presented the group poster.*

Other side: *My teammates did not have a chance to speak.*

6. If the coin lands on the tail (picture) – tells about the weakness, something he/she dislikes in learning process or what is not satisfied with school and describes “the other side of the coin” – what is good about this negative side.

Weakness: *My group mates were not ready for the lesson.*

Other side: *It allowed room for creativity.*

7. Everyone tosses the coin in turns and at least twice.
8. Later the grid is summarised and presented, submitted for the teacher to make sure students have managed to find good arguments.

It leads to the conclusion that there is no completely positive or negative thing – every coin has two sides.

Every strength has within it the potential for weakness, and likewise every weakness has within it the potential for strength.

- Assessment – “finding both sides”
- Students’ feedback

The reflection of students during the classes of the study course Mentoring in Education (master students).

Reflection questions after the toll application	Respondents’ evaluations in groups
Were there more talks about the strengths or weaknesses?	<p><i>We talked more about the weak sides.</i></p> <p><i>It was in balance.</i></p> <p><i>We spent more time on weaknesses.</i></p> <p><i>There were more discussions about the strengths.</i></p> <p><i>For both, but there was more to comment on weak sides – that which casts doubt.</i></p> <p><i>Our group had a balance between the two sides.</i></p> <p><i>Equal, others did not have to help find either the positive or the negative, because it was already determined individually.</i></p> <p><i>There were more discussions about weaknesses because it is relevant.</i></p> <p><i>It was important to discuss the issues with the group members.</i></p> <p><i>It was easy to talk about ourselves, because we had answered the questions of the questionnaire before.</i></p>

<p>How did you succeed in talking about yourself and formulating the other side?</p>	<p><i>Very good, because we have prepared a self-assessment at home and had the confidence to reveal ourselves.</i>  <i>It was easy because the justification had already been partly written.</i>  <i>Easy, open, acknowledging the situation “as is”.</i>  <i>Given that we had performed our self-evaluation before, it was quite easy to talk ...</i>  <i>Very easy and successful because the self-assessment has been prepared in advance.</i>  <i>There were no problems because the answers were already thought about. There was only necessary to find and formulate at the positive - and at the negative +.</i>  <i>We did well! Sharing experiences makes it easier to formulate answers.</i>  <i>We concluded that mentees are afraid to disturb and ask for help from colleagues.</i></p>
<p>What was more difficult to formulate?</p>	<p><i>It was difficult when talking about the positive to find flaws.</i>  <i>It is a little harder to find the other side of the coin.</i>  <i>Harder to talk about what works well.</i>  <i>It was more difficult to formulate the “other side” in all cases.</i>  <i>Finding weaknesses in strengths.</i>  <i>To think of one answer from both sides at the same time – positive and negative for one question at a time.</i></p>
<p>What is the purpose of this mentoring task?</p>	<p><i>To develop active listening skills and respond meaningfully to what the narrator is saying.</i>  <i>To see that there are two sides to every problem and two solutions.</i>  <i>Listening skills, concentration, exchange of ideas, feedback, moving towards the goal.</i>  <i>To listen and find solutions, insights, etc.</i>  <i>The purpose of the tasks in mentoring is to be aware that each person has both “sides of the coin”; the conversation in the group creates an experience that we gain in negotiations about success, our anxiety. By throwing a coin in this way, we can understand the strengths and weaknesses of the mentee.</i>  <i>Reflecting in a group we can share experience, thoughts, sometimes saying new ideas out aloud we can get to the result faster.</i>  <i>The aim of this exercise in mentoring is to be able to look at the answers from different angles.</i>  <i>To listen to others without interruption, share experience, insight into supervision.</i>  <i>To share experience, encourage something new. To find commonalities and similarities. To encourage each other.</i>  <i>Colleagues gain confidence.</i>  <i>Self-assessment is a useful process for understanding potential risks that need more attention.</i>  <i>Tossing a coin balances the pros and cons to talk about both sides.</i></p>

- Visualized examples

The work of students during the teaching practice seminar (Bachelor students).

Name	Strength	Weakness in strength	Weakness	Strength in weakness
A	<i>I mostly performed practice tasks independently.</i>	<i>There is a lack of cooperation with the most experienced colleagues – deputy principal, field coordinator and other teachers.</i>	<i>Class lesson 5th grade. The language barrier.</i>	<i>Experience – how to work in a minority school.</i>
B	<i>I managed to observe the lessons of several colleagues, to get examples of good practice.</i>	<i>The notes made in the observation checklists are chaotic and difficult to analyse.</i>	<i>I was afraid to teach a class lesson, it is hard to reprimand and be strict.</i>	<i>Experience – not everyone will always be interested in the lesson, I must be morally prepared for it. The teacher is not an entertainer.</i>
C	<i>It was possible to learn many new and useful things.</i>	<i>The information provided was sometimes confusing, as it was sometimes difficult to understand what was being done.</i>	<i>Distance learning during the lockdown. It was difficult to get documents, communicate with teachers.</i>	<i>Observing online lessons, I have got to know more about the possibilities offered by technology and how diverse the remote lessons can be.</i>
D	<i>Teacher used Nearpod and the pupils liked it, as well as another site – to create avatars and answer questions about Christmas.</i>	<i>Initially, 2 minutes were lost for children to log in to Nearpod. At some point, it was necessary to attract attention.</i>	<i>It was hard to meet the mentor.</i>	<i>There was a possibility to work independently.</i>
E	<i>We did not manage to talk to the language coordinator.</i>	<i>However, we managed to interview the music and culture coordinator.</i>	<i>Lack of time.</i>	<i>Learn to plan your time so that you can manage everything.</i>

## CONCLUSION

The tool introduced in this chapter may be used in all the education cycles and can be integrated in different subject areas. It is relatively easy to implement in any classroom provided it requires minimal preparation. The experiential learning approach encourages both active participation and reflections on the activities the participants are engaged in, while the reflection theory underlying this tool is crucial within the personal, academic, and professional development. In brief, “Heads and Tails” should be viewed as a dynamic and functional tool for enhancing students’ critical thinking skills.

## REFERENCES

Beard, C. M., Wilson, J. P. (2006). *Experiential Learning. A Best Practice Handbook for Educators and Trainers*. London and Philadelphia: Kogan Page.

### **The tool has been borrowed from**

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