# PLAY WISE TOOL KIT

# Critical, Creative and Caring Fun Thinking for Citizenship

George Ghanotakis, Ph.D.

**Playwise toolkit, abridged version** 



# **Institut Philos**

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Wisdom Matters! Play Wise Tool Kit, Part 1 Guide to the game PlayWise

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#### Critical Acclaim for the Game of Wisdom (Play Wise)

"An excellent tool in the form of a parlor game. Satisfying for the stimulation and the chance to appreciate each individual's unique way of seeing things."

 CM Reviewing Journal of Canadian Materials for Young People vol 7/3 Canadian Library Association.

"The most intelligent game since chess!"

– Radio-Canada/ CBC

"One of the best games I ever played ... it helps your memory, you really get smart ... The game helps you because it makes you feel good about what you say."

- Children - Child Study Centre University of Ottawa

"Satisfies many needs of children: The need to express themselves, to construct an argument, exercise judgment and appreciate the idea of other." – Le Devoir

"... adapts itself to all ages: it is fun to play for children, interests teens and stimulates adults ... contributes to the development of basic skills in language arts, mathematics, science, and social studies."

- Vie Pédagogique, Quebec Ministry of Education.

"...The built in debating aspects of the game provided fun to all players, be they students or adults....Would no doubt enlarge the student's understanding of self and others in various life situations, teach students to be analytical and evaluative in judgment making, decision and problem solving skills in the learning process. These evaluators all made strong recommendations for their institutions to purchase the game."

Professor Louis K. Ho, Librarian,
 Visiting professor (University of Lethbridge) and
 Fellow, Canadian College of Teachers.

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"If there is anything the world needs, it is wisdom. Without it, I exaggerate not at all in saying that, very soon there may be no world or at least none with humans..." Robert Sternberg, Wisdom Intelligence and Creativity Synthesized (2003)

Play is the highest form of research- Albert Einstein

#### Introduction Play Wise: Meeting the needs of 21<sup>st</sup> century learners

Increasingly, the teaching of critical literacy, moral reasoning, character education and dialogue skills for citizenship are the 21<sup>st</sup> skills which have become a priority in our information based society to meet the needs of future STEM careers and ensure the survival of the planet. The new conception of intelligence transcends IQ and book smarts. Wisdom- based thinking skills comprise the new predictor of success EF (Executive function). EF skills cover the essential cognitive skills of attention, mindfulness, flexibility in entertaining several perspectives, problem solving, logical and processing speed.

Wisdom- based thinking skills comprise not only EF but also those skills that guide the will towards the right choices for the common good in responsible citizenship. That is, those higher order thinking skills that build virtuous character traits (respect, empathy, compassion, collaboration) or habits of mind using reflective and dialogue skills in a cosmopolitan world. Wisdom-based Skills are the philosophical skills. The definition of philosophy is the love of wisdom (philo-sophia). The philosopher is the person who is skilled at combining dialogue and reasoning skills for ethical conduct and responsible citizenship.

Furthermore, a research shows, wisdom-based skills must be taught with reflective, emotional and social components across curriculum content in a manner to bring into play as many styles of thinking and intelligences whereby students learn to reflect together on what they say and on the reasoning that supports their views avoiding verbal abuse and stereotyping. Most importantly, the fostering of Wisdom skills must be made fun in an experiential safe setting for sharing insights about real-life situations.

These principles have inspired the creation of the *Play Wise* Tool Kit. The *Play Wise Tool Kit* benefits from an augmented edition of *The Game of Wisdom* that has added strategy and pictures to make play more interactive, simple and fun while keeping the reflective and dialogical elements aligned with the new emphasis of Wisdom-based thinking Skills.

The reflective elements and questions of Play Wise are based on years of validation successfully field- tested by the Canadian Institute of Philosophy for Children and thousands of schools with regular and exceptional children (children with learning disabilities, and gifted students), in both home, school, alternative and institutional settings, afterschool programs, summers camps, as well as wisdom family clubs and intergenerational play.

It is important to mention the positive educational function of games in learning, socialization and the development of children's' talents. Already Plato advised to keep children to their studies by play in order to enable us "to discern the natural capacities of each".<sup>1</sup> It is well established now that games build memory, cognitive skills and neuroplasticity improving the health of the mind, in the same way that physical exercise makes the body strong and youthful.<sup>2</sup> In *Super Better* <sup>3</sup> Jane McGonigal reveals a decade's worth of scientific research into the ways games make us stronger, happier, and braver in the face of depression. Her book makes the case that the gamer spirit — an attitude of fun, dedicated, collective collaborative problem-solving — is our greatest asset as we face the social, economic, and environmental problems of the 21st century.

Although focusing on digital and the video games which occupy 1.3 billion players in the world, for a minimal 12 hours a week, 97 % of males and 92 % of female teens,<sup>4</sup> McGonigal concludes that all games—including videogames, sports, and puzzles, help us develop resilience in everyday life simply by adopting a more "gameful" mindset to help us achieve real-world goals. Fantasy role playing games are being used in Boys and Girls Clubs as tools to involve students in critical thinking and creative reasoning and cooperative problem solving, in a safe and fun environment.<sup>5</sup>

<sup>&</sup>lt;sup>1</sup> Plato, *The Republic*, Book 7.536 e.

<sup>&</sup>lt;sup>2</sup> Play is leading source of development in terms of emotional, social, physical, language and skills. See George Ghanotakis (2104) *Growing Up Smart: Wisdom for Children, Games and the Brain Revolution,* DCCED, Ottawa, pp1-2.

Jane McGonigal (2015) Super Better: A Revolutionary Approach to Getting Stronger, Happier, Braver and More Resilient Penguin New York. See also her book, Reality Is Broken: How Games Make Us Better and How They Can Change The World, is a New York Times (2011). <sup>4</sup> Ibid, p. 24

<sup>&</sup>lt;sup>5</sup> Jason Howard (2015) Adventures in Reasoning, Communal Inquiry Through Fantasy Role Play, Rowman & Littlefield, New York, pp. .xi-xii

Building on the importance of play involving tournaments PlayWise Olympiads sponsored by the International Center for Education, Philosophy and Citizenship will use questions developed by students during activities and workshop and philo labs (school based dialogue learning centers) and validated according to philosophical criteria. The choice of this model inspired by the High School Ethics Bowl in the United States and by the argument based on a philosophical and democratic discussion (*Discussion à visée philosophique et démocratique* (DVPD)) which has been implemented by the new UNESCO Chair of Philosophy for Youth in Paris, at the University of Nantes and made popular.<sup>6</sup>

<sup>&</sup>lt;sup>6</sup> See Chapter 4 on Play Wise Olympiads. Also www.institutphilos.com.

# Chapter 1 : Teaching for Wisdom, Ethics Education and Citizenship

Let no one be slow to seek wisdom when he is neither young, nor weary in the search thereof when he has grown old, for no age is too early or too late for the health of the soul- Epicurus

The call today for teaching moral values and character education, for developing 21st citizenship skills, is being heard. Moral values and civic education are increasingly mandated. In 2009 one could count no less than forty-three states in the US which had enacted mandatory support legislation to help institutions develop positive values for students to become good citizens.<sup>7</sup> In 2016 the Belgium government introduced the course Education for Philosophy and Citizenship, stressing the need for critical thinking about problems and dialogue skills for debating to resolve issues in a democratic peaceful fashion, skills that a philosophical education best develops.<sup>8</sup>

Indeed, the capacity to solve intricate dilemmas is "only one aspect of wisdom" and derives from such psychological and moral qualities as compassion and good habits of living.<sup>9</sup> Character education and intelligence must be guided by the practice of wisdom.<sup>10</sup> Only wisdom guides the good use of knowledge and application of intelligence guiding moral reasoning<sup>11</sup>. Here's how Robert Sternberg, a leading educational psychologist puts it: "*If there is anything the world needs, it is wisdom. Without it, I exaggerate not at all in saying that, very soon there may be no world or at least none with humans…*"<sup>12</sup>

<sup>&</sup>lt;sup>7</sup> Maughn Gregory (2009) "Ethics Education and the Practice of Wisdom ", *Teaching Ethics* 9 (2) 105-130.

<sup>7.</sup> See the program EPC ( Éducation à la philosophie et la citoyenneté ) replacing one hour a week of moral or religious education ) which all schools must implement in October 2016 as one or two hours a week, depending on parents'choice. EPC on The Ministry of Education of Wallonie-Brussels website.

<sup>&</sup>lt;sup>9</sup>Ibid, p.119. Dr. Gregory is the present director of the Institute for the Advancement of Philosophy for Children at Montclair State College in the US. <sup>10</sup> Ibid.

<sup>&</sup>lt;sup>11</sup> R.J. Sternberg (2003) *Wisdom Intelligence and Creativity Synthesized*, New York, Cambridge University Press, Preface: "The wise person realizes that what matters is not just knowledge, or the intellectual skills one applies to this knowledge, but how the knowledge is used. IQs have been rising over the past several generations (Flynn, 1987; Neisser, 1998).The perpetuation of ever worse massacres and genocides suggests that wisdom has

not been rising concomitantly."

<sup>&</sup>lt;sup>12</sup> Ibid., Preface.

Sternberg integrates Wisdom as a mega skill in what he baptizes the WICS model (Wisdom, Intelligence and Creativity Synthesized).<sup>13</sup> Wisdom is not just a way of thinking but a way of doing things.<sup>14</sup> Wisdom is a skill to weigh options carefully and prudently. The wise person understands his or her personal shortcomings and applies the skills of successful intelligence and creativity for achieving not only knowledge for one's success but for the common good. Wisdom as caring for the good is important since often bright people make use of their intelligence to gain power at the expense of others.<sup>15</sup> To be wise is to apply one's intelligence, creativity, and knowledge toward the achievement of a common good."<sup>16</sup> But how does one teach children to be wise?

#### Reflective, Dialogical and Dialectical

#### Wisdom Based Thinking Skills

To teach children wisdom is not sufficient to tell them to be wise. It is accomplished by designing activities to help them think analytically (critically), creatively, practically, and engage in "reflective" dialogue. Dialogue is essential to share one's own point and integrate different points of view for workable solutions that will benefit all concerned<sup>17</sup>.

Among the Wisdom based-thinking skills needed Sternberg lists three major clusters: reflective skills, dialogical and dialectical competencies and dispositions, which are important skills made

<sup>&</sup>lt;sup>13</sup> Ibid. See also George Ghanotakis . *Growing Up Wise* (2015) Institut Philos, Chapter 3 'Wisdom , Creativity an Successful Intelligence, 'pp. 40 ff.

<sup>&</sup>lt;sup>14</sup>Ibid. p.188. See also R.J. Sternberg et als, editors *Teaching for Wisdom Intelligence*, *Creativity and Success (2009)* Thousand Oaks, California Corwin ; *Wisdom: Its Origins and Development, edited by Robert Sternberg (1990)* New York, Cambridge University Press.

<sup>&</sup>lt;sup>15</sup> Explaining the new shift of his theory of balanced intelligence as paying, he writes:

<sup>&</sup>quot;It is for this reason, that I have now turned my attention to wisdom (Sternberg, 1998b, 2001a). In my balance theory, I view wisdom as the value-laden application of tacit knowledge not only for one's own benefit (as can be the case with successful intelligence) but also for the benefit of others, in order to attain a common good." Sternberg Wisdom, Intelligence and Creativity Synthesized (2003), Preface.

 <sup>&</sup>lt;sup>16</sup>R.J Sternberg, L. Jarvin, E. Grigorenko (2009) *Teaching for Wisdom*, *Intelligence*, *Creativity and Success*, Thousand Oaks, CA p. 138.
 <sup>17</sup>Ibid, p.109.

operational in the debating communities of inquiry of Play Wise Olympiads.<sup>18</sup>

# The Three Wisdom -Based Thinking Skills are: <sup>19</sup> A- Reflective Thinking Skills Awareness of thoughts Awareness of beliefs/ values Questions self or if on right track Identifies problems, resources Self-corrects, modifies if in error Seeks helps, ideas, best strategies <sup>20</sup> Sets Goals / controls distractions

#### **B-** Dialogical Thinking Skills

-Considers multiple perspectives

-Weights carefully alternatives

-Considers the good of others

-Likes to exchange ideas, dialogue

-Respect the view, feeling of others

-Is not obstinate, egocentric

#### **C- Dialectical Thinking Skills**

-Likes to debate but not to fight

-Considers pro and con, both sides

<sup>&</sup>lt;sup>18</sup> See intra Playwise Olympiads; Also G. Ghanotakis, *Teaching Dialogue* (Institut Philos, 2016).

<sup>&</sup>lt;sup>19</sup> Adapted from R. Sternberg et als, editors *Teaching for Wisdom Intelligence, Creativity and Success (2009)* Corwin, Thousand Oaks California, p.138.

<sup>&</sup>lt;sup>20</sup> Sharon Zumbrum ,et als (2011) *Encouraging Self-Regulated Learning in the Classroom:* 

A Review of the Literature

http://www.selfregulation.ca/download/pdf\_documents/SelfRegulated.

-Likes to reconcile opposing views

-Extends insights raises questions

-Continues dialogue to explore ideas

-Values justice as much as truth

### Chapter 2 : LIST OF CRITICAL THINKING SKILLS DEVELOPED, MULTIPLE INTELLIGENCES AND MEGA-SKILLS

Here's a list of Critical Thinking and Moral skills developed More than 33 of the essential higher order thinking skills correlated to the language and mathematics achievement. The list was established by the Cornel Critical Thinking and the New Jersey Test of Reasoning Skills developed by ETS (Education Testing Service, Princeton), showing the highest correlations for reading comprehension .82 and math .65.<sup>21</sup>

The list also integrates specific reasoning skills required in moral education for deciding about values issues.<sup>22</sup>

- 1. Clarification and definition/ ability to avoid vagueness (definitions should not be circular, and must avoid ambiguity which confuses. In defining we must show a thing differs from other similar things)
- 2. Working with analogical reasoning (working with resemblances, to put oneself in other shoes is sometimes termed moral imagination)
- 3. Determining cause and effect relationship ( to be avoided is the " after this, because of this" fallacy and admitting an explanation using the word *because* as a justification proving a causal connection )
- 4. Classification (classes, subclasses and class types)
- 5. Dealing with inclusion and exclusion
- Concept development / mapping; "operationalizing concepts (examining the effects of concepts which are the criterion e.g. something heavy falls (expressed as a conditional (if...then). If something is heavy, it falls)

<sup>&</sup>lt;sup>21</sup> See Matthew Lipman et al. (1987) *Philosophy in the Classroom :* Philadelphia : Temple University Press , Appendix.

<sup>&</sup>lt;sup>22</sup> Lipman (1991) *Thinking in Education* Appendix, Applying Specific Reasoning Skills', pp 201-216

- 7. Resolving conflicts situations
- 8. Checking consistency and non-contradiction (two statements are contradictory, if either one is true, the other must be false)
- 9. Establishing criteria for judgement ( criteria are standards, what we consider most important in deciding about values or a situation)
- 10. Decision making: use of criteria in predicting and estimating consequences
- 11. Dealing with differences of degree and of kind ( involving different ideas)
- 12. Providing examples and instances (to prove one's point of view)
- 13. Providing counter –examples, exceptions or counter-examples ( examples apply ideas to concrete situations, counter-examples are means of refuting)
- 14. Generalizing correctly (working with data, avoid hasty generalizations)
- 15. Grading ( as opposed to mere grouping or sorting without ranking )
- 16. Grouping (or sorting does not distinguish the better from the worst, like grading)
- 17. Making hypotheses (hypotheses are ideas that are ways to solve problems; the skill involved entails being able to confirm or disconfirm the prediction.
- 18. Making valid inductions 9 based on sufficient instances and evidence)
- 19. Making inferences (perceptual and verbal)
- 20. Working with opposites
- 21. Dealing with part and whole relations (by avoiding the fallacies of division and composition

- 22. Open -mindedness to different perspectives for multiple problem solving (entertaining different answers to a question or several solutions to a problem)
- 23. Scientific inquiry skills
- 24. Reasoning with turn around and carry over relationships (Peter is taller than Mary and Mary is taller than Alice therefore Peter is taller than Alice )
- 25. Reasoning with classes involving simple syllogisms
- 26. Mastering the reversing of subject and predicate in "all", "some" and "only" statements
- 27. Reasoning with statements beginning with "only", " all" and "some"
- 28. Reasoning with sequence/ seriation and rank
- 29. Reasoning with similarities and differences (including contrasts and juxtaposition)
- 30. Detecting Stereotyping
- 31. Identifying and recognizing assumptions
- 32. Resolving dilemmas for best consequences or ends
- 33. Valuing (involving prioritizing values and the good)

#### The Game of Wisdom and Multiple Intelligences

The range of questions of the game Play Wise covers the following types of intelligence or styles of learning or talents:

- **Visual-spatial Intelligence**, as the players moving strategically around the board and in the mental imagery of the category of question Imagine and the interpretation of the meaning of pictures.

- **Verbal-linguistic Intelligence,** in reading questions and interpreting the meaning and expressing answers.

- **Bodily-kinesthetic Intelligence**; fine motor skills and versions of the games that involve miming and gestures.

- **Logical-mathematical Intelligence**, in the categories of logic and critical thinking questions.

- **Interpersonal Intelligence**, as each player is accorded 10 seconds to reflect on the question and in the category of questions identified as Thinking and Discovery, build up on each other's answers while respecting different opinions.

- **Intra-personal Intelligence**, as players have to listen without interrupting, inquire into self -identity, and involving reflecting on one's thinking in the categories of questions Varia and Thinking.

- **Naturalistic Intelligence,** discriminating and valuing about nature and animals, questions of the categories Discovery and Imagination.

- **Existential Intelligence**, in answering philosophical questions about the meaning of life, and ethical choices for a better world.

Let us note that the questions of *Play Wise* encompass the three dimensions of Wisdom cognitive, the reflective and the affective (moral –social feelings). They also tie in with five main areas of the curriculum: Language Arts, Mathematics, Science, Social Studies and personal and Moral Development, and cover the philosophical domains of logic, epistemology, ethics, science inquiry, aesthetics and social – political concerns.

The Game of Wisdom and

Exercising Five Mega Skills<sup>23</sup>

 $<sup>^{23}</sup>$  The Five Mega Skills or major operation of intelligence was proposed by J.P Guilford's

Multi-factorial view of the structure of the intellect in *The Nature of Human Intelligence (1967)* ,New York, McGraw-Hill.

Finally let us note that Play Wise rules of game play provide practice in exercising the following five mega skills:

- 1- Memory,
- 2- Comprehension
- 3- Convergent thinking,
- 4- Divergent thinking and
- 5- Decision making.

1) Memory: Each player has to remember what answers have been given to a specific question so as not to repeat them.

2) Comprehension: Players are challenged to broaden their understanding of a question as to allow different contexts of meaning;

3) Convergent Thinking: Players have to solve problems in providing a solution or specific answer in context bond issues.

4) Divergent Thinking (Creativity): Once a possible solution one had in mind was provided one has to think of alternative answers or opposing views.

5) Evaluation: In the process of envisaging different solutions players have to assess the relevance, evidence and the plausibility criteria of the game.

Needless to say that the role of the judge involves the combination of these skills in rendering a fair appreciation in view of the multiplicity of answers and cultural views.

# Chapter 3 : Curriculum Uses of Play Wise

Play Wise in its first edition as The Game of Wisdom has been validated by several school consultants for use as an effective tool in supporting areas across the curriculum in elementary and high school settings, for regular and special education ( learning disabilities and gifted), language schools, social science philosophy classes, colleges. The ten areas of the curriculum where it has been used are:

#### Language Arts

#### -Reading Comprehension / Literacy

Competency in analysis, synthesis, application, paraphrasing and evaluation which increase reading comprehension,

#### -Writing Skills

Competency in description, clarification of meaning, sequencing, rephrasing and organizing of ideas, comparison, contrast, summary and argument.

#### ESL (English as Second Language)

Fosters the communicative whole approach, provides practice in dialogue, dealing with "ambiguity of words', ability to express oneself clearly and concisely, listening to others and summarizing stories, grasping meaning and language proficiency both orally and in writing.

#### Social Studies

Establishing and recognizing relationships, trends, analogical reasoning, making analogies, value judgments, mastering concepts and necessary skills to sift available information and theories, avoiding prejudice and exclusion working for the common good.

#### **Special Education (dealing with exceptionalities)**

Improvement of executive functions at the root of learning disabilities (phonological, cognitive and social skills) particularly logic and metacognitive capacities, see list in the taxonomy of critical thinking skills.<sup>24</sup>.

#### Mathematics

<sup>&</sup>lt;sup>24</sup> *The Game of Wisdom* was first field tested for remediating areas of thinking skills deficiency at the Ottawa Child Study centre of the University of Ottawa, in 1987.

Evaluating, ranking, recognizing classes and subclasses, logical reasoning, deductive and inductive inference, interpreting and solving word problems, questioning and justifying solutions, successfully dealing with relational thinking and problem solving strategies.

#### Science/ STEM

Science skills include inquiring skills, hypothesizing, verification of hypothesis and of relevant instances/ examples, distinguishing between similarities and differences, sequencing, comparative analysis, inductive and deductive thinking, reasoning about categories and attributes. Many of the inquiry math and science related skills practiced are essential **STEM** skills.

#### **Ethics and Moral Education**

Awareness of values and beliefs supporting moral reasoning, resolving moral dilemmas and conflicts, practicing empathy, compassion and moral imagination, understanding the meaning of rights and duties, applying character strengths and virtues such as courage, honesty, loyalty, friendship, trust, working collaborative discussing using reflective, dialogical and dialectical skills.

#### **Critical and Creative Thinking**

Understanding and applying the higher order logical thinking skills in assessing evidence e and argument avoiding fallacies, formal and informal (see list of taxonomy of skills)

#### High School and College Philosophy

- **Epistemology** (how we know? Are there some things humans can never know or with absolute certainty? What counts as a justification in claiming to know something?), ethics (what is right and wrong?);

-**metaphysics** (what is Being, God, illusion and reality? what is the self, personal identity? What is the meaning of life? Are human actions free?);

**Aesthetics** (what is beauty?), social and political philosophy (what is most important freedom or equality? What is justice?);

-logic and philosophy of science (critical thinking and dialogue skills to construct the good argument, distinguish between valid and invalid arguments, avoiding fallacies; what constitutes a law-like explanation?);

**-ethics** (what are good and evil? rights, virtues and duties? what is the good life? the distinction between pleasure and happiness? how to justify moral acts, resolve moral dilemmas?);

-social and political philosophy (does everyone have a right to equal treatment? be free to do what they want & what are individual rights and responsibilities in society?).

## Chapter 4 : Before Playing the Game

#### A. Teacher/ Student Preparation

The following are directives and practices used in the experimentation of the Game of Wisdom for the success of Play Wise:

- a) Teachers will read all questions and instructions carefully becoming acquainted with the various categories of questions and skills (see analysis and taxonomy of skills).
- b) Questions may be selected according to set of skills or themes to be discussed in relationship to curriculum adapted at various levels.
- c) It is recommended that teachers play the game with colleagues, family, and friends so they can be fully familiarized with the game, trying out the various versions and both ways of playing with an independent or rotating judge.
- d) Before having the game played by children, start by discussing with the whole class divided in 6-8 groups (teams) a question at a time so as to develop the creative and critical thinking skills in encouraging alternative good answers and assessing reasons.

Each question of the game is presented by identifying three elements<sup>25</sup>:

- a) The skill(s) that it develops ( in relation to the taxonomy of skills of the game presented )
- b) The concept(s) to be discussed and the domain of studies or curriculum connected
- c) The curriculum domain it relates to so both at middle school and high school

Students will become acquainted with the skill, concept and curriculum relevance of the questions so as to internalize the skills and apply the concepts during the game.

<sup>&</sup>lt;sup>25</sup> See *Play Wise Tool Kit, Part 2* for the analysis, identification of skills and concepts for each question of the game.

#### A- Using *My little book of Questions* or individual question cards

An user friendly way is to make use of the illustrated questions from *My Little books of Questions* or the card game *The No Nonsense Game* series which is a complement to Play Wise with the illustration for discussion starters, as for example questions such as

"Imagine you were the last remaining dinosaur would you live near **people?**" (Either written on the board)

The following method has proven effective:

- a) Brainstorming ( as a list form or as an visual organizer web chart )
- b) Critically reflect on the answers to examine, eliminate and justify (How much of the brain storming is good?)

Groups attempt to brainstorm for 5 minutes, as a **First step** without judgment and accepting all answers and then as a

**Second step**, reviewing answers contributed by the group to identify those that could be backed with a good reason, not just an explanation. A good reason means there is a valid justification. This exercise will encourage a reflective attitude and the production of reasoned judgment.

**These two steps** (brainstorming and reflecting on answers for good reasons) will build the creative critical thinking, serving as a corrective to an unreflective brainstorming which is often an outburst of opinions or possibilities.

Critical thinking when rightly understood is not merely logical thinking deprived of the creative exploration of sound alternatives. In fact, the etymological root of critical is *krino, as* noted, implies discernment and selection of alternatives. The logical demand for coherent meaning and relevance is the "quality control 'element in creative thinking.

The four little booklets *My Little Book of Questions*<sup>26</sup>, exploiting illustrations to formulate questions and answers, also should be used for purposes of sharpening questioning skills as well as for the ability to perceive the point of the question, and the relevance of the answers. The booklets provide samples of good possible responses by other children to compare and contrast finding.

# **B-** Practicing Dispositions of Critical Thinking in the context of a cooperative framework:

Goal: All players can win if they provide different answers/solutions backed by valid reasons

Student should practice:

- 1) State opinion clearly
- 2) Focus on a solution without worrying whether it is the only or best possible answer
- 3) Listen carefully, pausing and reflecting with an open mind to the perspectives of the other players.
- 4) If a similar idea has been expressed, try to anticipate other ways of looking at the problem
- 5) Take responsibility for their thinking
- 6) Have confidence in themselves and respect for other views

#### Fouls 1) name-calling

2) Put-downs

\_\_\_\_\_

- 3) Not listening
- 3) Attacking the person rather the opinion or idea expressed
- 4) Not taking responsibility for what one says.

# Fallacies1) popular-thinking "because most people think that way it must<br/>be true or right."

<sup>&</sup>lt;sup>26</sup> Ghanotakis (2014) My Little book of Logic, My Little book of Imagination, My Little book of Discovery, My Little Book of Wright and Wrong, DCCED /Institut Philos, Ottawa.

2) Appealing to false authority- ex. appealing to a hockey player to support a claim about what makes a person good

3) Providing no reason or justification, but just a feeling

4) Making a hasty or sweeping generalization without making distinctions about individuals or groups not fitting or excluded

5) Making part-whole or whole part connections, by attributing necessarily the characteristic of a part to the whole which comprises many parts or inversely.

## Chapter 5 : During Playing the Game

#### PLAYWISE BOARD GAME RULES

#### AGE 6+ 2-4 players (teams)

Aim: Be the first to have 5 cards, 1 from each category, plus 10 laurels.

**Contains**: Game board, 200 question cards in 5 categories: Logic (red), Imagination (blue), Discovery (green), Thinking (yellow), Varia (grey), 2 die, 52 picture cards, 8 tokens, 52 laurel cards, 12 clue cards (Yes, No, Depends) with pictograms.

#### How to play:

**Preparation**: Every player (team) gets 2 tokens of the same colour, one to place in the space START; the second serves as a right to speak (RS) token. b) 3 clue cards (for Yes, No, Depends). Each person rolls the dice. Highest total starts.

#### GAME I: FUNNY PICTURES: 4 simple steps.

(Everyone is dealt 5 picture cards; no clue cards or RS tokens used in this version)

**Step 1:** Throw the dice to choose a space on the board by adding or subtracting number of dots on the two dice. The person to your left serves the role of the judge. The judge picks a question card according to the colour of the square you land.

**Step 2:** The judge reads the question card aloud (e.g. Should we free all the animals from the zoo?) and all players, except the judge, lay one of the picture cards that best matches the question, face down (15 seconds time limit). Then, the picture cards are shuffled around to keep anonymous.

**Step 3:** The judge turns up the cards and decides which one best matches the question, and explains the decision. The player whose picture card is picked wins a laurel and the question card (at the end of the round). This player also has the chance to win a second laurel if he/she can add a different explanation in 10 seconds.

**Step 4:** Next; it is the turn of the other players to explain their picture card and tell their story to win each a laurel for their explanation. At the end of the round, the used picture cards are returned to the bottom of the picture card deck.

**End of Game**: Game continues clockwise with the next player to throw dice. Repeat steps 1-4 until a player wins 5 question cards, one from each category and 10 laurels.

**Option:** Have an independent judge instead of a rotating judge. Make teams and adapt the rules with younger players (e.g., win with 3 cards and 5 laurels, extend time to respond).

Penalty: 2 laurels for interrupting.

**Special Spaces:** Arrow: Start (after starting the game, pick a laurel and throw again). Sigma ( $\Sigma$ ) (Greek letter S for Sophia: Wisdom), choose category.

#### FOR TWO PLAYERS ONLY

In Step 2, the judge draws 2 additional picture cards, and shuffle together with the card that you have played. The judge then flips all 3 cards and chooses the one that best matches the question, explaining why. If the picture card chosen is not your card, you don't get the question card, but can still win a laurel if you can justify your choice. Players then switch roles and continue.

GAME II: PLAY WISE DIALOGUE (With clues and/or RS token; No picture cards)

**Step 1:** Roll the dice, and move forward to land your pawn on a square. The judge picks the question card according to the color of the square, and then reads the question aloud.

There are 2 possibilities:

**A.** If the **question card color is red, blue, green or yellow**, players must quickly lay a **Yes, No or Depends** clue card face down and place their RS token on the board.

#### Or

**B.** If the **question card color is grey,** no clue cards are used since with Grey card questions cannot be answered by Yes, No or Depends; everybody except the judge must quickly put their RS tokens on the board for participating in answering the question.

**Step 2:** Now, the judge rereads the question, **if possibility A** you reveal the clue card and have 15 seconds to pick up your RS token, answer the question and give a reason. You will be rewarded the question card and a laurel at the end of the round. (**If possibility B**, Grey card, you simple pick up your token and answer the question).

**Step 3:** Next, it is the turn of the other players to reveal their clue cards. But beware! Only those with different clue cards from yours can answer. The first one to remove his/her RS token goes first. If the player succeeds in giving an answer according to his/her clue card in 10 seconds, he/she wins a laurel (If possibility B, just pick up token and add your answer). **Step 4:** Finally, when all players have a say, the judge throws one die to identify who can win an extra laurel if a different answer can be added. This is a chance for those who didn't get any laurels to earn one.

**End of Game**: Game continues clockwise. The next player throws the dice. Repeat steps 1-4, until a player wins 5 question cards, one from each category and 10 laurels.

#### GAME III, EPIGRAM: PLAYWISE: WRITE & SPEAK!

Play the game with paper and pencil: First, everyone writes down an answer in 1 minute and keeps it secret. Then the first player reveals his/her answer by reading it aloud. The other players take turn clockwise to give their answers. Similar answers as the first player's are eliminated. All other answers even if they adopt the same position, but are different in kind, win a laurel.

**Bonus optional**: Players express their preference for the best answer (funny or unique) without voting on their answer. One laurel is awarded.

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#### The Free Online Game

The online version of the game aims to enable teachers who are comfortable with ICT to set up an educational use of the game regardless of the size of the group. Now, through the online game it would be possible from anywhere in the world to exchange on philosophical questions, and thus communities of inquiry could be created. The project of PlayWise Olympiads is being enthusiastically received by representatives of many countries: France, Canada, Switzerland, Germany and Mexico to name only a few. Facilitation for teachers and young people will be shortly available.

#### The online game would work as follows:

The judge role, initially filled by teachers, will be allocated a virtual room where many participants can join (the maximum number can be determined by the judge), and access to this room would be protected.

The judge has access to the unveiling the question displayed for all participants. Once the response time has elapsed, the judge chooses the answer that appears to him the best (based on the argument and justification), awarding points to the person who gave it.

Then it is the turn of all other players to react by positioning (agree or disagree) with the answer, and giving a justification. The relevant justifications earn points as well. The judge also has the ability to send messages to all players (preconceived valid varied messages are available).

It is possible to join a room and then participate. When a question is displayed, the player has 60 seconds to answer : YES / NO / IT DEPENDS (if the question allows it). Then a list of thinking skills and values is proposed (which can be determined randomly among a list, or previously chosen by the judge) in the form of checkboxes.

A dialog box allows a limited number of words to justify the opinion given. The double constraint requires each participant to work in a collaborative manner. Winners of the can react as described above, and new (by default the same) thinking skills are provided giving 60 seconds to position (AGREE / NOT AGREE).

The possibility to have more options for the management of the game such as the creation of new questions, categories and themes will be open with the purchase of a Premium account, which will be provided for free with the training related to the PlayWise Olympiads.

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#### PLAY WISE OLYMPIADS

PlayWise Olympiads will use questions developed by students during activities and workshop and philo labs (school based dialogue learning centers) and validated according to philosophical criteria. The event will take the form of a tournament whereby a team (of two or three students) of each participating school qualify for quarter-finals, semi-finals and a final being evaluated in their dialogical critical, creative and caring ( attending to another's point of view). The choice of this model inspired by the High School Ethics Bowl in the United States and by the argument based on a philosophical and democratic discussion ( *Discussion à visée philosophique et démocratique* (DVPD)) which has been implemented by the new UNESCO Chair of Philosophy for Youth in Paris, at the University of Nantes and made popular.

Each game will have the following format: the two teams face to face, a leader randomly identifying category of question selected by students by a wheel of wisdom. Depending on the category (Logic (red), Imagination (blue), Discovery (green) Thought (yellow) and Varia (grey)teams in turn present argument according to the discussion model PHILOS validated for twenty-five years in various cultural contexts in Canada and the US<sup>27</sup>.

THE PHILOS model of critical thinking discussion

30 minutes (2 segments of 15 minutes each)

Round 1 has 5 parts

Step 1.(**30 seconds**). The team that wins a coin toss elect to present first (Team A) their answer to the question in a reasoned position which the other team (Team B) will comment.

Step 2. Choice of Questions and reading aloud (1 minute). The Wheel of Wisdom is spun to determine category question then question is read by the moderator. PHILOS ARGUMENT COOPERATIVE CONTEST (10 minutes)

Step 3. **PHI (2 minutes): Presentation period.** Team A will confer 1 minute followed by 1 minute to present their reasoned opinion using the first three letters **PHI** of the acronym PHILOS argument model. PHI represents the three first step of the philosophical community of inquiry model PHILOS<sup>28</sup>.

<sup>&</sup>lt;sup>27</sup> Philosophical and pedagogical foundations of the demonstration of the efficiency of the WRATEC model can be read about in Ghanotakis, George (2005) —Encounters with Philosophers in the Classroom : The WRATEC Discussion Model in Action||, *Journal of Childhood and Philosophy*, No.1 June 2005, 265-287.

<sup>&</sup>lt;sup>28</sup> For the characters representing these steps (used to dramatize or have the argument played in the classroom) see George Ghanotakis (2014), *La fleur du dialogue : les outils de l'argumentation structurée*, Institut Philos, Montréal. Adapted from « Le Dialogue PHILOS » a chapter of *La Caverne et l'ange gardien* (Cram/Institut Philos, 2004)

#### P.H.I.

P stands for Position or Proposed view

H stands for the reason or Hypothesis supporting the view

I stands for the Inference to be drawn, as a consequence or practical Implication from this position held.

Step 4. **L.O.S (2 minutes) Comment period**: Team B in turn confers 1 minute, followed by 1 minute to provide a commentary examining and improving on the view proposed by Team A using the remaining three letters L O S (of the PHILOS argument model).

L stands for shedding Light on the truth or validity of the view proposed or any sneaky silent premise

O stands for Omission if something important was missing or Objection & counterexamples

**S** stands for **S**ynthesis or **solution** as correction proposed to improve the position of Team A.

Step 5. Team A Reply to Team B (1 minute) Team A confers (30 seconds) then responds to Team B by clarifying the intended or making a self-correction. Second half of Round PHILOS repeated with Team B going first (10 minutes)

6. Choice of a new question. Then the roles of teams are reversed. Team B answers the question by presenting their position (PHI) to be commented by Team A, using the steps of LOS. Team B will then reply.

**7 Judging: (3 minutes): The judges will have 3-minutes for question-and-answer session**. Each judge should have time for one question and each team should be addressed and respond to at least one question.( Students will be trained in the criteria of the role of the judge).

**8** Appraisal and Scoring (2 minutes) Judges then evaluate the Presentation, Commentary, Response to Commentary, and Responses to the Judges' Questions by Teams A and B, by taking into consideration the collaborative element in building the best argument and score each team on a scale of 0-100 points (100 best) on a score sheet, without necessarily discussing their scoring with each other.

**Evaluation Criteria:** relevance in addressing the question, soundness or weakness of argument, originality and insight, thoughtful consideration for other's position, ability to self-correct.

Final Round : Intuitions

One Question

a) The moderator spins the Wheel of Wisdom to select final question (30 seconds)

b) Teams confer to offer as many good answers as possible (30 seconds)

c) Then each team in turn alternates giving a valid answer (to be expressed within the time limit of 15 seconds). Each answer is delivered by a different member of the Team proceeding clockwise, without however repeating any idea already expressed, until a team member is unable to add a new answer. (2 minutes)

d) The winning team gets 50 points

e) Then judges will have 3-minute question-and-answer session with each team to award from 1 to 50 points for each team.

#### Criteria used

Four Criteria for judging PHILOS dialogue using the Argumentation Rating Tool (ART) recently developed and validated by Reznitskaya, A., Wilkinson, I. A. G., & amp; Oyler, J. (2016)<sup>29</sup> :

1. Shared (centering on contestable, sharing responsibilities, discussing alternatives)

2. Clear (Clarifying meaning, connecting ideas, labelling moves and parts of argument)

3. Acceptable (evaluating facts, evaluating values)

4.Logical (articulating reasons, evaluating inferences).

<sup>&</sup>lt;sup>29</sup> Reznitskaya, A., Wilkinson, I. A. G., & Oyler, J. (2016). Argumentation Rating Tool. Rezntiskaya, A., Wilkinson, A. I. G., Oyler, J., Bourdage Reninger, K., & Sykes, A. (April, 2016). Using the Argumentation Rating Tool to Support Teacher Facilitation of Inquiry Dialogue in Elementary Language Arts Classrooms. Paper presented at the Annual Meeting of the American Educational Research Association, Washington, DC.

## CHAPTER 6 : AFTER PLAY

# EXERCISES IN STUDENTS' PLAY WISE WORKBOOK JOURNAL

The Play Wise Creative Writing Workbook is a weekly journal to record reflections and questions and creates two questions suggested by the class discussion of questions cards played.

Play Wise work book using *My Little Book of Questions* series<sup>30</sup>, the teacher can use as part of the Play Wise complete school kit.

Five steps are suggested to carry discussion into writing and drawing, particularly with younger kids:

- 1. Read aloud the question and look at the picture "What does the illustration suggest? ( use the Dialogic method of prompting the child to tell rather than listening passively);
- 2. Now think of an answer providing a reason (because...). Can you think of a different answer?
- 3. Now let's read the suggested answer: Do you agree with this answer? Why or Why not?
- Extend the thinking by asking what would happen if...? ... (Somebody didn't agree nor had an opposite answer? To explore some consequences (write down a sentence of that consequence)
- 5. Now try to illustrate some of the ideas you found interesting or learned by drawing a picture?

More than 200 exercises in reflection, sharing and creating questions applying Bloom's Taxonomy (Play Wise Tool Kit, Part 2)

The series published by DC-Canada /Institut Philos comprises 4 volumes

My little Book of Right and Wrong, My Little Book of Logic, My Little Book

of Discovery , My Little Book of Imagination , by George Ghanotakis . www,dc-canada. ca.

Another series of exercises to be done in the student's Play Wise workbook integrate the skills developed by each question. There are more than two hundred exercises suggested in the Part 2 of the Play Wise Tool kit which offer a wealth of ideas for lesson plans and skill consolidation.

The first part of the exercise consists in figuring out an answer to the question by sentence completion using word clues. The second part involves formulating a reasoned judgment in agreement or disagreement with the given answer.

- 2 clues are given:
- i) A crossword puzzle clue of the missing word in a sentence to be completed (number of letters of the word are given);
- ii) The second clue is the first letter of word.

(One can increase the level of challenge by using only two word of a possible answer are given)

Players are encouraged to figure out the different answers to the questions and discover different perspectives. This exercise may be done individually or in groups. After playing students will summarize findings by

- a) Formulating a question inspired by one of the question played, identifying the skill and the theme it relates to
- ii) Writing out a practical/ personal application to a life situation.

Here's an example from *Play Wise Tool kit 2*:

**THINKING 57** 

Should everyone be free to do what they want?

#### **Exercise your wisdom:**

(a)Figure out kid's answer by completing the mystery word (2 clues: first letter of word, number of letters)

Not, if they plan to do h.... (4 letter word)<sup>31</sup>

<sup>&</sup>lt;sup>31</sup> harm. See Play Wise Tool-Kit, Part 2 (2016), Institut Philos, Montreal. An interesting exercise applying the taxonomy of Bloom( analysis, synthesis and evaluation) and making a transfer of skills from the oral to the written is provided in the five steps of the Little Thinkers workbooks. The student completes a question by looking at an illustration then turning the page and answering the question. The next step consist in of comparing his/her answer with those of two other kids noting the similarities or difference. Next a synthesis is made noting what new ideas were learned and an opportunity to illustrate

#### (b) Do you agree?

#### Do you have an alternative answer?

(c) How would you apply the insight in a real life situation?

(d) Identify the skill and concept applied and formulate a similar question that will be discussed by the class.

visually. \* See *Little Thinkers booklets* (Mysellf and Others, Imagine), Institut Philos, Montreal.

## **CHAPTER 7 : ASESSMENT TOOLS**

"The Game of Wisdom has been assessed by the English and French Consultants...It improves thinking skills such as logic and moral reasoning. It is an excellent way to develop creative skills. It also supports many areas of the curriculum."

- Superintendent of Schools, Ontario

#### A- TAXONOMY OF SKILLS CHECKLIST

(More than 33 of the essential higher order thinking skills correlated to the language and mathematics achievement).<sup>32</sup>

Achieved Yes / No 2. Critical Thinking and Moral skills Training in clarification and definition..... 1. Training in analogical reasoning..... 2. 3. Determining cause and effect relationship..... 4. Classification (in classes, subclasses and class types)..... 5. Dealing with inclusion and exclusion..... Concept developing and concept mapping..... 6. 7. Resolving conflicts situations..... Checking consistency and non-contradiction..... 8. 9. Establishing criteria for judgement..... 10. Decision making .....

<sup>&</sup>lt;sup>32</sup>Established by the Cornel critical Thinking and the New Jersey test of reasoning skills developed by ETS, showing the highest correlations for reading comprehension .82 and math .65 ( See Matthew Lipman ( 1987 Philosophy in the Classroom : Philadelphia : Temple University Press , Appendix)

Achieved Yes / No
11. Dealing with differences of degree and kind
12. Providing examples and instances
13. Providing counter -examples and exceptions
14. Generalizing correctly
15. Grading
16. Grouping
17. Making and hypothesis
18. Making valid inductions
19. Making inferences (perceptual and verbal)
20. Working with opposites
21. Dealing with part and whole relations( avoiding the fallacies of division and composition)
22. Open -mindedness different perspectives for multiple problem solving
23. Scientific inquiry skills
24. Reasoning with turn around , symmetrical and carry over relationships
25. Reasoning with classes involving simple syllogisms
26. Mastering the reversing of subject and predicate in "all", "some" and "only" statements
27. Reasoning with statements beginning

with "only", " all" and "some"
28. Reasoning with sequence and rank
29. Reasoning with similarities and differences (including contrasts and juxtaposition)
Achieved Yes / No
30. Detecting Stereotyping
31. Recognizing assumptions
32. Resolving dilemmas for best consequences or ends
33. Valuing (involving prioritizing Values and the good)

## B- ASSESSING Problem Solving and Growth Mind Set Checklist: Attitudes, Habits and Skills Acquired

The Game of Wisdom has proven to be a very effective tool for problem solving in a cooperative and fun manner particularly in developing positive mind sets, creativity, listening and dialogue skills, empathy and capacity to make judgments synthesizing in different points of views.

The following of evaluation of these skills and attitudes achieved by playing the game once a week was adapted from *Problem Solving: A practical and essential grid.*<sup>33</sup>

#### **ATTITUDES/HABITS**

Acquired Yes/ No

CONFIDENCE in one's ability to solve problems by Convinced that there is not always one solution to a problem
LIKES TO KNOW other solutions than his/her own
<b>DERIVES PLEASURE</b> and excitement from wondering and Finding solutions to puzzles and questions of no single answer
ENTHUSIASM in working with other and persevering In problem solving
<b>CREATIVITY</b> seeking personal and original ways through Analogies, associations, think outside of the box
<b>RISK TAKING</b> in giving opinion and share his effort to explore
<b>CRITICAL THINKING</b> , asks questions and evaluates what another Affirms (particularly developed through the role of the judge)
ORGANIZATIONAL SKILLS dealing with problems in a Systematic way and with justification

<sup>&</sup>lt;sup>33</sup>Instantanés Mathématiques, Volume xxi, D APAME, 1984-1985.

COLLABORATIVE INQUIRY receptivity, listening attentively.....

<b>RESPECT, COURTESY AND EMPATHY</b>	to others to others
Who have different reasons and opinions	

#### Acquired Yes / No

#### SKILLS

MAKES GOOD USE OF creative problem-solving and strategies
<b>REFORMULATES</b> the meaning of words or a problem to be understood
<b>IDENTIFIES</b> and distinguishes the elements for solving a problem
ENTERTAINS a problem through different angles
<b>TESTS</b> and ascertains that a solution is the right one by criteria
<b>IS READILY OPEN- MINDED</b> and works through dialogue And discussion to solve problems and convince
<b>REASONING SKILLS ACQUIRED</b> (SEE TAXONOMY OF SKILLS)

# APPENDIX 1: TOOLS THAT COMPLEMENT PLAY WISE GAME

#### A- MY LITTLE BOOK OF QUESTIONS SERIES <sup>34</sup>

The illustrated questions in this series of books encompass cover many of the essential inquiry, moral reasoning and cognitive abilities of the Play Wise, organized main in four categories:

Discovery(What Can I Know?)Ethics(What's Right? What's Wrong?)Imagination(What Would Happen If...?)Logic(What's a Good Reason?).

#### MY LITTLE BOOK OF QUESTIONS SERIES

Is based on the Game of Wisdom and has been conceived for children four years and up in order to help them:

- A) ENLARGE UNDERSTANDING OF SELF AND OTHERS IN VARIOUS LIFE SITUATIONS PROMOTING COSMOPLITANISM
- B) ENHANCE MORAL REASONING AND SOCIAL-EMOTIONAL INTELLIGENCE AND GOOD CHARACTER

#### C) STIMULATES EXECUTIVE BRAIN FUNCTIONS

- iii) Attention
- iv) Concentration
- v) Working Memory
- vi) Deduction
- vii) Problem solving
- viii) Flexibility
- ix) Processing Speed
- x) Visual Skills

<sup>&</sup>lt;sup>34</sup> Ghanotakis (2014) My Little Book of Logic, Ottawa DC Canada Education Publishing, Ghanotakis (2014) ,My Little Book of Imagination Ottawa DC Canada Education Publishing, Ghanotakis (2014) My Little Book of Right and Wrong, Ottawa DC Canada Education Publishing,

Ghanotakis, (2014) My Little Book of Discovery, Ottawa DC Canada Education Publishing,

#### C- ENRICH VOCABULARY

#### D- SHARPEN MATH AND LANGUAGE SKILLS

#### E- FOSTER DIALOGUE AND CITIZENSHIP SKILLS

#### F- BOOST BRAIN POWER AND INCREASES IQ

The questions in the little books offer opportunities for parents and teachers to spark dialogue and reflection both at home (around the dinner table), as critical thinking is not merely an academic matter, and at school as conversation starters in a portable user friendly fashion.

The series features deal with important reasoning skills which have proven to improve reading, writing and arithmetic.

Young children might not be ready for lessons in formal logic. But they can be taught to give reasons for their conclusions. And they can be taught to evaluate the reasons given by others.

The series of interactive dialogues involves writing assignments and encourages children to ask good question, to interpret information, detect bias, and consider different values and perspectives. They are given opportunities to:

- analyze analogies
- · create categories and classify items appropriately
- identify relevant information
- · construct and recognize valid deductive arguments
- test hypotheses
- •recognize common reasoning fallacies
- •distinguish between evidence and interpretations of evidence.<sup>35</sup>

<sup>&</sup>lt;sup>35</sup> An interesting initiative use of the questions and illustrations in this series has been the monthly serialization by EARLY EDUCATION MAGAZINE of China of the questions in an interactive format. See link on <u>www.dc-canada</u>. ca.

# FROM LISTENING AND TALKING TO ASKING RELEVANT QUESTIONS AND WRITING

Here's a sequence of five strategies uses for proceeding with each open question as illustrated:

- 1. Read the beginning of the question and look at the picture. Can you complete the question?
- 2. Turn the page. Are you surprised? Try to answer the question giving a reason.
- 3. Compare now your answer with a friend's answer. Are there any differences? Or similarities with both of your answers?
- 4. Next, write down what you think after sharing your ideas with someone else. Do you get any new ideas?
- 5. Finally illustrate some of your ideas.

Have Fun and be Wise!

# Appendix 2 : Visual Organizers and Thinkingprocess Maps

Visual organizers are graphic representations such as thinking process-maps, which make use of the right hand side of the brain. They empower learners make use of the whole brain to become fluent with patterning information and better capturing their own thinking processes. These visual tools also enable students to reflect back on their ideas, track their reasoning processes to refine them and get feedback.

An example of these thinking organizers is the eight thinking maps that David Heyeler synthesized.<sup>36</sup> The eight cognitive essential skills are: seeing analogies, cause and effect relations, sequencing, whole/part, comparing and contrasting, describing qualities and context/ frame of reference. Each skill has been graphically structured through a thought- map making it easier for students understand concepts, analyze problems and find solutions.

The visual representations corresponding to the eight thought process maps are:

- the circle map or concentric circles for defining context used in brainstorming;
- -the bubble map for describing qualities,
- -the double bubble used for comparing and contrasting;

- the tree map for classifying and grouping ;

-the brace map for part-whole relationships,

- the flow map for sequencing,
- -the multi-flow map for depicting cause-effect relations and
- the bridge map for seeing analogies.<sup>37</sup>

A tree-map for example is a thinking map for classifying by organizing information into different groups and subgroups so that one

<sup>&</sup>lt;sup>36</sup> David Heyeler, (1996) Visual Tools for Constructing Knowledge, Alexandra, Virginia, ASCD.

<sup>&</sup>lt;sup>37</sup> See the "8 Thinking Processes" on the site of the Malaysian Ministry Education. Retrieved from <u>www. IThink.org.my</u>. For an effective way to use Venn Diagrams to defeat the logic of stereotypical thinking see George Ghanotakis (2013) *Donut Logic and Stereotypes*, Montreal, Institut Philos.

can understand the bigger picture in a comprehensive way. For instance, the division of food into vegetables, meat and fruits.



**Visual organizer Tree – Map** for classifying and grouping

#### Venn Diagram for visually representing inferences

*While "all German shepherds are dogs", not "all dogs are German shepherds," Phil concedes.*<sup>38</sup>

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overlapping circles of the onion rings

(B)

(A) Ring (A) representing

Ring (B) representing dogs that

German shepherds

are not German Shepherds

<sup>&</sup>lt;sup>38</sup> See George Ghanotakis, (2013) *Donut Logic and Stereotypes* (Institut Philos), Montreal.



# PLAY WISE TOOL KIT, PART 1 A GUIDE TO THE NEW EDITION OF THE GAME OF WISDOM

#### George Ghanotakis, B.Ed, Ph.D.

This book offers an up to date tool kit to implement Play Wise, the new augmented edition of award winning *The Game of Wisdom*, with an introduction to the new foundational of Wisdom based Thinking-Skills (reflective, dialogue and dialectical/argument skills), a taxonomy of competencies and assessment tools.

The Game of Wisdom has been approved by school boards, parents and teachers and successfully field tested by the Canadian Institute of Philosophy for Children with regular and exceptional children and used in homeschooling and institutional settings, afterschool programs, summers camps, wisdom family clubs, wisdom contests and intergenerational play.

#### Praise for Play Wise (The Game of Wisdom):

"Fun and enlightening! May well foster the skills and dispositions constitutive of critical thinking."

H. Siegel author Educating Reason,

Professor of Philosophy and Education, Miami University.

"... adapts itself to all ages: it is fun to play for children, interests teens and stimulates adults ...contributes to the development of basic skills in language arts, mathematics, science, and social studies."

Vie Pédagogique, Quebec Ministry of Education.

"The Game of Wisdom has been assessed by the English and French Consultants...It improves thinking skills such as logic and moral reasoning. It is an excellent way to develop creative skills. It also supports many areas of the curriculum."

Superintendent of Schools. RCSSB, Ontario

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