The Implementation of Multiple Intelligences Theory in the Classroom: Different Ways of Learning and Teaching

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ABSTRACT: Multiple Intelligences (MI) theory is based on a totally different view of intelligence in which in addition to verbal/linguistic and logical/mathematical intelligences, other types of intelligences are emphasized. According to this theory, all humans possess at least eight different intelligences that are proportionately different from individual to individual. Accordingly, in order to encourage language learning through a variety of tasks in which the individuals' interests and strengths are considered, this paper reports a number of reasons why teachers respond positively to MI theory. Subsequently, the goals of MI-based programs together with approaches and activities are discussed to show how MI theory applies to English language teaching.

Keywords: multiple intelligences, MI-based Instruction, implementation, assessment

Gardner (2006) defines intelligence “as a biopsychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture” (pp. 33-34). This definition is based on a different view of intelligence according to which all humans possess at least eight intelligences (Christision, 1998):¹

- Bodily-kinesthetic
- Intrapersonal intelligence
- Interpersonal
- Linguistic intelligence
- Logical-mathematical intelligence
- Musical intelligence
- Spatial intelligence
- Naturalist intelligence

¹ For further information on theoretical aspect of Multiple Intelligences Theory refer to Saeidi (2007).
Gardner also proposes other types of intelligences including existential and spiritual intelligences; however, they are not included in the list of multiple intelligences because empirical evidence is sparse in this regard (Gardner, 1999, cited in Smith, 2002). Gardner (2006) further mentions that:

"My conservative nature dictates caution in giving the ninth place of honor to existential intelligence. I do mention this candidate intelligence in passing, but, in homage to a famous film by Federico Fellini, I shall continue for the time being to speak of 8 \frac{1}{2} intelligences." (p. 21)

As Smith and Smith (1994) argue, Gardner has been a paradigm shifter. He has questioned the idea that intelligence is a single entity or results from a single factor and can be measured simply via IQ tests. Moreover, although Gardner believes that human abilities (and human differences) have a genetic base, he rejects the “inherited versus learned” dichotomy and instead stressed the interaction, from the moment of conception, between genetic and environmental factors (Gardner, 1995).

In short, MI theory states that every human being has all the intelligences; it is a matter of being less or more developed in a particular intelligence. Moreover, intelligences are not static; they can be developed. They seldom act alone; they interact. According to Smith (2002), Gardner (1995) claims that multiple intelligences rarely operate independently. They are used at the same time and tend to complement each other as people develop skills or solve problems. Finally, Gardner argues that each intelligence is not a unitary phenomenon; each manifests itself in different ways, for example, a person high in bodily–kinesthetic intelligence is not necessarily good at all sports.

The practical implementation of Gardner’s theory of MI is one of the main goals of educators. As Haley (2004) states, the results of the studies on MI indicated that teachers were profoundly affected by MI theory. He further mentioned that students demonstrated interest in MI concepts and developed positive attitudes towards it. Thus, the purpose of this study is to review applications of MI theory in foreign and second language classroom and discuss the factors that contribute to the appeal of MI theory to both teachers and students.

Educators and Multiple Intelligences Theory

According to Smith (2002), Gardner’s MI theory has not been readily accepted within academic psychology. However, it has met a strongly positive response from many educators. It has been embraced by a range of educational theorists and, significantly, applied by teachers and policymakers to the problems of schooling. A number of schools in North America have looked to reconstruct their curricula with regard to the intelligences and have attempted to design their classrooms and schools in a
way that they could reflect the understandings that Gardner has developed. The theory can also be found in use within pre-school, higher, vocational, and adult education initiatives (ibid). Smith (2002) further mentions that this appeal was not, at first, obvious. At first blush, as Gardner (1993, p. xxiii, cited in Smith 2002, p. 4) asserts, “it seemed that it was hard to teach one intelligence let alone seven intelligences. Gardner argues that seven different kinds of intelligence will provide the opportunity to teach in seven different ways.

Kornhaber (2001, cited in Smith 2002) identifies a number of reasons why teachers and policymakers in North America have responded positively to Gardner’s MI theory. They believe that the theory reflects the daily experience of educators and provides them the mental ability to organize the curriculum and think on different ways of assessment and teaching pedagogy and thus, develop new approaches according to the needs of the learners. Similarly, Guignon (1998) points out that when Gardner’s MI theory burst on the scene, it seemed to answer many questions for experienced teachers. She further maintains that Gardner’s MI theory helped teachers and educators to better understand their students and appreciate their capabilities. Armstrong (1994, cited in Christision, 1998) mentions four key points that educators find attractive about MI theory:

- **Each person possesses all eight intelligences.** In each person, the eight intelligences function together in unique ways. Some people have high levels of functioning in all or most of the eight intelligences; a few people lack most of the rudimentary aspects of intelligence. Most people are somewhere in the middle, with a few intelligences highly developed, most modestly developed, and one or two underdeveloped.

- **Intelligences can be developed.** Gardner suggests that everyone has the capacity to develop all eight intelligences to a reasonably high level of performance with appropriate encouragement, enrichment, and instruction.

- **Intelligences work together in complex ways.** No intelligence really exists by itself in life. Intelligences are always interacting with each other. For example, to cook a meal, one must read a recipe (linguistic), perhaps double it (logical-mathematical), and prepare a menu that satisfies others you may cook for (interpersonal) and yourself (intrapersonal).

- **There are many different ways to be intelligent.** There is no standard set of attributes that one must have in order to be considered intelligent. Someone who is awkward at sports does not mean that s/he cannot be a marvel in building construction; both activities require bodily-kinesthetic intelligence.
Application of MI Theory to the Classroom

The theory of multiple intelligences gives some innovative ideas to teachers to teach in the classroom. Armstrong (2000) points out that one of the most remarkable features of MI theory of multiple intelligences is how to provide eight different potential pathways to learning. He further argues that “MI theory facilitates effective learning if a teacher is having difficulty reaching a student in the more traditional linguistic or logical ways of instruction” (p. 1). As Armstrong (2000) puts forth, the theory helps teachers to make decisions on the most effective ways of teaching and learning tools and goes beyond the traditional methods common in different educational systems.

According to Viens (1999, p. 3), most MI-based programs have been initiated to address three goals:

1. To create opportunities for students across a range of intelligences (exploration)
2. To give students intensive opportunities in areas of strength (talent development)
3. To create more individualized or personalized education by more directly addressing students’ intellectual strengths in their curriculum (using strengths).

Viens (1999) further mentions the following approaches and activities which were developed to address the aforementioned goals:

- Providing a variety of curricular options, which give opportunities to both the teacher and the student to uncover their own strengths and interests.
- Providing choice among activities or “entry points” to develop understanding or learning skills. Allowing students to learn in ways in which they are most comfortable increases the chances for substantive learning, as well as increasing the student’s self-esteem.
- Expanding instructional strategies and media based on intelligences. The MI theory has been a useful way to analyze and expand instructional practices and the media used.
- Informally assessing student intelligences toward developing educational activities. A definitive assessment of a student’s intelligences is not only difficult, but also not necessary (Gardner, 1996, as cited in Viens, 1999). Informal assessments based on observations, student checklists and questionnaires, and other classroom activities such as dialogue journals and intake interviews provide a context to collect valuable information about students’ areas of ability.
- Expanding assessment options to allow for students’ use of areas of strength in demonstrating their learning.
Application of MI Theory to ELT

Po-Ying (1999), in his attempt to apply MI theory to English Language Teaching (ELT), states that MI theory acknowledges a broader intellectual spectrum in every learner. He further points out that language teachers today are better aware of the fact that students bring with them specific strengths, unique learning styles, and different learning potentials.

Referring to Christision (1996), Po-Ying (1999) lists four steps to show how MI theory applies to ELT:

The first step is to identify the activities frequently used in our classes and categorize them to each particular type of intelligence. For this purpose, he developed a list as a frame of reference (Appendix 1). The second step is to make plans by selecting appropriate classroom activities/tasks, taking the following factors into consideration: students’ needs, strengths, levels, learning styles, learning strategies, learning potentials, the nature of the subject matter, the teacher’s personal teaching rationales, his/her multiple intelligence profile, and teaching style, etc. The third step is to use ELT MI Weekly/Monthly Checklist to keep track of different activities/tasks conducted in the class. Po-Ying rightly points out that teachers need not include activities for developing all the eight MI within each lesson; they may, however, follow the fourth to expand their classroom activities for the neglected intelligences by way of examining and analyzing their checklists for a period of time. (para 10)

It is worth mentioning that Po-Ying (1999) developed a lesson plan on the topic titled “Customs Vary with Culture” selected from Mosaic One: A Content-Based Reading (Appendix 2).

Christision and Kennedy (1999), in their attempt to describe how MI theory has been applied to teaching English as a second language to adults, points out that teachers have developed four ways of using MI theory in the classroom:

As a tool to help students develop a better understanding and appreciation of their own strengths and learning preferences.

As a tool to develop a better understanding of learners’ intelligences.

As a guide to provide a greater variety of ways for students to learn and to demonstrate their learning.

As a guide to develop lesson plans that address the full range of learner needs.

Christison (1998, p. 5) further asserts that “few theories have been embraced more enthusiastically by EFL teachers in the past few years than Gardner’s theory of multiple intelligences”. She mentions that, as EFL teacher educators, we want information and resources about the theory; we want to know how to help teachers apply it in the classroom. Accordingly, she introduced several steps that if followed could introduce the theory to
teachers in either in-service or preservice programs:

**Step 1: Introduce the basic theory.** Use a simple, interesting, and unique way to introduce MI theory.

**Step 2: Use an MI inventory.** Armstrong (1994, cited in Christision, 1998) asserts that before teachers apply a model of learning in the classroom, they should apply it to themselves as educators first. Therefore, the next step in helping teachers apply MI theory in the classroom is to help them determine their own MI profile.

**Step 3: Categorize familiar EFL activities.** In order to begin lesson planning, it is important for teachers to be able to identify the activities they would normally use in their lessons and identify the intelligences the activities represent.

**Step 4: Conduct a personal audit of teaching strategies.** This activity is reflective in nature and requires that teachers look at the activities they typically include in their lessons. The activities are then categorized according to the different intelligences.

**Step 5: Develop different assessment techniques that also address the eight intelligences.** Not only should teachers be concerned with MI in their lesson plans, they should also be concerned with MI in the assessment techniques they employ. For example, instead of giving short pen-and-paper quizzes as self-tests, “Find Your Partner” activity can be used, in which half of the class can be given the questions and the other half can be given the answers. Then they are asked to find their partner. By the change of the focus of the assessment component, we can expand on the number of intelligences that are being developed in the lesson. Pen-and-paper assessment techniques work to develop the linguistic intelligence. The Find Your Partner version uses the bodily-kinesthetic intelligence, as well as the interpersonal intelligence (ibid).

Christison (1998) concludes that there is not a unique way toward MI theory, and any teacher may have their own MI profile. A team of teachers, Adult Multiple Intelligences (AMI) study, which explores the application of MI theory to adult learning and teaching, has studied the effects of using multiple intelligence-based instruction in their adult education classes. Their experience suggested that MI theory has much to offer adult basic education (Kallenbach, 1999). The majority of the AMI teachers did find value in viewing their students through an MI lens. They felt that they gained a richer perspective on the student as a whole person. Rocka (1998, cited in Kallenbach, 1999) notes that her class became more interactive and student directed as she experimented with MI theory.

According to Coustan and Rocka (1999), a reading lesson which was modified after learning about MI is a good example of the choices to apply MI theory in the classroom. The topic of the reading was Meet Addy by Connie Porter. It is about some of the experiences slaves had on the
underground railroad. Addy, the main character, is a young teen born into slavery who escapes with her mother to freedom. After pre-reading, students were asked whether they thought that Addy and her Mama would be able to get freedom. They discussed and wrote and then they were asked to apply all the skills they already learned, reminding them to use their finger, a pencil, or a book mark to help guide their eyes. After reading, to add an MI perspective to the reading lesson, the following post-reading choices were proposed, which students could do them alone, with a partner or in a group:

- Draw a picture or show in a play any part of what we read.
- Pick a song or a chant that would give you inspiration if you were doing something very scary.
- Write the words to the song or sing it.
- Make your own map of Addy and journey either on paper or with a play.
- Write or discuss with someone a part of what we just read that you think is interesting.
- Act out a part of what we just read.
- List the places Addy and Mama hid on their escape to freedom.
- Design your own project for this chapter. (ibid, p. 3)

Coustan and Rocka (1999) point out that MI-based instruction did seem to facilitate learning. Reading comprehension did not seem to happen as easily when students only read and wrote. There seemed to be a synergy between expression and comprehension. Students seemed to gain greater understanding of a story after they expressed what they read in a way that was comfortable for them. MI-based instruction, also, seemed to cause improvements in specific reading strategies. When the students were given the freedom to choose how they wanted to express what they understood, they became invested in the final results of their efforts and wanted their information to be presented as accurately as possible. Coustan and Rocka (1999) conclude that:

Teachers are bombarded with new curricula and instructional approaches. Each new approach seems to suggest that we replace the old with something new. Applying MI theory was different: It did not mean that we abandon activities that are important to us and to our students. It meant that we enhance them and think about our students differently. (p. 3)

Saeidi (2004) examines the impact of Multiple Intelligence-Based Focus on Form (MI-FonF) on enabling EFL learners to develop both the grammatical knowledge of the target structure and the ability to use it in context. Three different treatments were employed in three experimental groups: MI-FonF provided focus on form, meaning, and use, along with focus on the learners' strengths and interests in language learning; Focus on
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Form (FonF) focused on form, meaning, and use without focusing on the learners' strengths and interests; and Focus on Meaning (FonM) focused on meaning without using FonF techniques to draw learners' attention to form. The control group, Focus on FormS (Fs), received traditional explicit grammar instruction. Saeidi (2004) concludes that integrating MI into FonF maximized the effect of the FonF instruction. MI-FonF encouraged the meaningful and appropriate use of the target structure. The construction of variety of tasks, with considerations derived from both MI and FonF, created an excellent opportunity for the learners to attend to all aspects of grammatical forms. Because of the congruity of the chosen tasks with the learners' interests and strengths, learners acquired positive attitudes towards grammar classroom, which is totally in contrast with such labels as "difficult" and "boring," which is commonly used by language learners to describe grammar classes.

Assessment Instruments in MI Theory

Gardner (2000, cited in Morris, 2002, p. 2) believes that “the classical short-answer examinations are of little use. Instead, Gardner is interested in asking people to do things and to observe their skill level in the task under construction”. According to Morris (2002), Gardner believes that an examiner would be better able to look directly at the skills and capacities so valued in the dominant culture. Gardner prefers to assess in “intelligent-fair” ways, that is, assessing people’s successes in carrying out valued tasks that presumably involve certain intelligences” (ibid). To better explain this, Gardner (2000, cited in Morris, 2002) cited several examples, including the following two:

First, one way to assess interpersonal intelligences would be to monitor individuals as they interact in real-life situation where they have to be sensitive to the aspirations and motives of others. Second, the visual-spatial intelligences would be assessed through performances in such activities as navigating an unfamiliar terrain, playing chess, interpreting blueprints, and remembering the arrangements of objects in a recently vacated room. (p. 2)

As children do not learn in the same way, they cannot be assessed in a uniform fashion. Therefore, it is important that a teacher create an “intelligence profile” for each student. Knowing how each student learns will allow the teacher to properly assess the child’s progress (Lazear, 1992). This individualized evaluation practice will allow a teacher to make more informed decisions on what to teach and how to present information. As Bruaildi (1996) points out, traditional tests (e.g. multiple choice, short answer, essay) require students to show their knowledge in a predetermined manner. According to Gardner (1993), assessment is an essential component of an MI education. He further asserts that it is particularly
important to use multiple modes of assessment that will allow students to show their strength and perform optimally.

Consequently, Po-Ying (1999) points out that many testing professionals nowadays employ authentic assessment, which emphasizes assessing what students know (knowledge) and what students do (performance) from different perspectives so as to provide a complete picture of students’ abilities, efforts, and progress during the learning process.

To conclude, the theory of MI which advocates “focus on the learner” in pedagogy, is very appealing to educators. MI-based Instruction can be used as a tool to create variety of meaningful tasks and activities, which are appealing to the learner because of being in line with the particular interest and strength of the learner. This, in turn, can assist learners in functioning more effectively. Therefore, teachers should begin to see the possibilities for the application of MI in foreign and second language classroom.

The Author
Mahnaz Saeidi, Assistant professor of English language at Islamic Azad University – Tabriz Branch holds Ph.D. in Applied Linguistics. She has published several articles and books and participated in a number of international conferences. Her major research interests are Multiple Intelligences, Emotional Intelligence, and Focus on Form Approach.

References
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**Appendix 1**

**Verbal/Linguistic Intelligence**

**Vocabulary and Grammar Learning** -- learning new words and grammatical points and practicing using them accurately in regular communication

**Listening** -- listening to tapes of stories, dialogues, and lectures, etc.

**Formal and Informal Speaking** -- making verbal presentation to others, making conversations, having discussions and debates, etc.

**Humor or Jokes** -- creating puns, limericks, and telling jokes on topics of study
Impromptu Speaking -- instantly speaking on a randomly drawn topic
Storytelling -- telling stories about any topic one is studying
Reading -- silent reading, oral reading, and group/choral/chain reading for comprehension
Writing -- doing written exercises, note-taking, summary/report writing, and journal/log/diary keeping to keep track of one's own thoughts and ideas

Creative Writing -- writing original pieces (e.g., stories, essays, poems, novels, etc.)

Logical/Mathematical Intelligence
Logic Pattern Games -- creating riddles or puzzles that challenge students to find a hidden rationale or pattern
Logical/Sequential Presentation -- inventing point-by-point logical explanations for items or making systematic presentation of subject matter
Number Sequences/Patterns -- investigating numerical facts or gathering and analyzing statistics on a topic
Problem Solving -- listing appropriate procedures for problem solving situations
Forming Relationships -- creating meaningful connections between different ideas
Syllogisms -- making "if..., then..." logical deductions about a topic

Visual/Spatial Intelligence
Visual Aids Using/Making -- using flash cards, pictures, paintings, charts, collages, graphs, grids, diagrams, flowcharts, slides, sculptures and video/film-viewing, etc. to facilitate learning and encouraging students to make the visual aids by themselves
Active Imagination -- finding connection between visual designs (or pattern) and prior experiences (or knowledge)
Mind Mapping -- creating or arranging visual mapping activities (e.g. word maze, visual webs of written information)
Environment Arranging/Decorating -- encouraging students to decorate bulletin boards, and arranging learning corner (e.g. English reading corner) to achieve the effect of peripheral learning

Bodily/Kinesthetic Intelligence
Physical Actions -- arranging and doing TPR and hands-on activities
Body Language -- "embodying" meaning, interpretation, or understanding of an idea in physical movement
Role Playing/Mime -- performing skits or characters to show understanding of topics of study
Dramatic Enactment -- creating a mini-drama that shows the dynamic interplay of various topics of study
Sports Games -- creating a contest or game based on specific knowledge about a topic of study
Field Trips -- arranging trips to gain firsthand knowledge away from the classroom

Musical/Rhythmic Intelligence
Music/Song Listening -- listening to rhythmic patterns, recorded music, or songs
Singing/Humming -- creating songs for a class, a team, a topic of study or finding existing songs that complement a topic
Musical Instruments Playing -- employing musical instruments to produce sounds for a lesson (e.g., background accompaniment, enhancement for the teaching)
Music Composition/Creation -- composing and creating music for the sound effect of a play performance or for the enhancement of teaching
Jazz Chants/Rapping -- producing or using rhythmic patterns, such as jazz chants, or raps to help communicate; or to remember certain words, sentence structures, concepts, ideas, or processes
Vocal Sounds/Tones -- producing sounds with one's vocal cords to illustrate the meaning of a word, or a concept (e.g., hiccup, gasp, etc.)

Interpersonal Intelligence
Person to Person Communication -- focusing on how teachers and students relate to each other and how to improve their relating
Giving and Receiving Feedback -- offering input on one's performance or about one's opinions, and accepting another's input or reaction to one's performance/opinions
Cooperative Learning Strategies -- using structured teamwork for topic learning and/or practicing peer learning
Pair Works and Group Projects -- investigating and discussing a topic problem with a partner or with others in teams
Jigsaw Puzzle/Strip Story -- dividing a picture or a story into distinct segments so that students can learn from each other on the process of putting it back to its original form

Intrapersonal Intelligence
Independent Studies/Projects -- encouraging students to work independently for goal-setting, process-planning, self-assessing, and homework choosing
Journals/Logs/Diaries keeping -- working with reflection tools, such as reflective journals, thinking logs, learning diaries, etc.
Focusing/Concentration Skills -- learning the ability to focus one's mind on a single idea or task
Thinking strategies -- learning what thinking patterns to use for what task

Naturalist Intelligence
Nature Encounters/Field Trips -- going outside for firsthand experiences in nature and/or bringing nature in the classroom via videos, objects, animals, plants, etc.
Species Classification -- working with classification matrices to understand characteristics of natural objects
Sensory Stimulation Exercises -- exposing the senses to nature's sounds, smells, tastes, touches, and sights
Hands-On Labs -- performing experiments or activities that use objects from the natural world
Nature World Simulations -- re-creating or representing nature in some form (e.g. photographs, drawings, etc.)
(Adopted from Po-Ying, 1999)

Appendix 2
A Referential Lesson Plan
In order to help English language teachers gain a better understanding about how MI theory applies to classroom teaching, I sketched a lesson plan on the topic titled "Customs Vary with Culture" selected from Mosaic One: A Content-Based Reading, a textbook used in my Freshman English Course, for reference.

Time Limitation: 3 consecutive periods
Student Level: Freshmen from the Dept. of Public Finance, NCCU
Class Size: 35 students
Teaching Method(s): Whole language learning & task-based learning

<table>
<thead>
<tr>
<th>1st period:</th>
<th>Classroom Activities</th>
<th>Approximate Time</th>
<th>Intelligence(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Giving background knowledge about the article and its author.</td>
<td>5 mins.</td>
<td>Verbal/Linguistic (through lecture)</td>
<td></td>
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<tr>
<td>Brainstorming on the priming questions, e.g., what purpose do you think the author had for writing this article? And/or, What does the title imply to you?</td>
<td>10 mins.</td>
<td>Verbal/Linguistic (through informal speaking) Intrapersonal, and Interpersonal</td>
<td></td>
</tr>
<tr>
<td>Listening to the taped article to grasp the main ideas.</td>
<td>5 mins.</td>
<td>Verbal/Linguistic (through listening)</td>
<td></td>
</tr>
<tr>
<td>Silent reading and oral reading for comprehension through the strategy of &quot;topic sentence&quot; detecting from each paragraph.</td>
<td>20 mins.</td>
<td>Verbal/Linguistic (through reading and reading strategies)</td>
<td></td>
</tr>
<tr>
<td>Vocabulary learning through the strategy of guessing meaning from context.</td>
<td>10 mins.</td>
<td>Verbal/Linguistic (through vocabulary and vocabulary learning strategies)</td>
<td></td>
</tr>
</tbody>
</table>
2nd period:

I designed five different tasks to be completed, (10 minutes for the performance/presentation of each task). Students can choose which task to work on either by joining a group or working independently.

**Task-1 (work in group)**

Look at the two drawings, concerning the customs of hand-shaking and social distance. Discuss in group and report the similarities and differences that may exist between the East and the West, or make a verbal debate against each other. (Visual/Spatial, Interpersonal, Logical, and Verbal/Linguistic Intelligences.)

**Task-2 (work in group or individually)**

Find a song concerning cultural differences or a folk song from a particular culture and enjoy listening and singing it with necessary explanation of its lyrics. (Musical/Rhythmic and Verbal/Linguistic Intelligences.)

**Task-3 (work in group)**

Write a skit based on a culture shock anecdote and performing it. (Verbal/Linguistic, Bodily/Kinesthetic and/or Visual/spatial, and/or Musical/Rhythmic Intelligences.)

**Task-4 (work in group)**

Discuss in small group a problem or an embarrassing situation you may confront with due to cultural conflicts, and come up a solution by drawing a flowchart to show its procedure. (Logical/Mathematics & Visual/Spatial Intelligences.)

**Task-5 (work in group or individually)**

Search for some unique words, or body language developed in a culture due to its particular natural environment, e.g., geographic location, climate, etc. (Verbal/Linguistic and Naturalist Intelligences.) (Adopted from Po-Ying, 1999)