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Presentation Title: The Use of Multiple Intelligences Theory in Large Computer-Assisted EFL Classes in Taiwan
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Abstract
The teaching of English as a foreign language in many colleges in Taiwan has not been effective due to the fact that most of the English classes are very large. This paper examines the use of Multiple Intelligences (MI) theory in large computer-assisted EFL college classes in Taiwan. With the multimedia instruction and learning through computer, the idea of individualized, student-centered teaching for big classes is possible. This approach implements Confucius’ beliefs in education: “to provide education for all people without discrimination” and “to teach according to the student’s ability.”

Keywords: Multiple Intelligences; Multimedia Computer Classroom; Collaborative Language Learning and Teaching

Background
In the past fifty years, the higher education system in Taiwan has flourished. According to the official report from the Ministry of Education (MOE) website, when the government moved to Taiwan in 1951, there were only one university and three independent colleges in Taiwan, namely the National Taiwan University, the Provincial Normal College, the Provincial College of Technology, and the Provincial College of Agriculture. However, at present, there are 152 universities and colleges in Taiwan (including open universities and military & police academies). In the past decade, the government has made some major changes in the university system of the ROC. One of the drastic reforms is to provide multiple channels for high school students to enter universities and colleges. “Recommendation Screening Examination Program”, “Entrance by Application Program” and “Preparatory Study System” are added to the traditional “University Joint Entrance Examination Program”, which basically tests students’ linguistic and logical-mathematical intelligences and has been implemented since 1954. Multiple channels direct high school students with multiple intelligences find their places in higher education. This significant reform is not only historical but also liberating.

However, with the increased enrollment of college students, the problem of
enlarged class size is entailed. For example, you might expect a big class of 70 in a Freshman English course with some returning students. For an EFL teacher, a large class is the most challenging thing to result in effective teaching. To promote quality language teaching for large classes with individualistic consideration, some methodologies, strategies and aids are needed. The combination of MI theory and computer-assisted instruction are very positive for effective EFL teaching.

Providence University is a fine university in Taiwan, but due to the fact that it is a private one, the students’ self-esteem is lower than that of those in national ones. Thanks to MOE’s recommendation and application programs, recently we have seen some outstanding students with excellent English fluency in our English Department. As a matter of fact, admitted students show their talents in different ways. I first began working with Multiple Intelligences Theory in 1998. During the school year of 2000-2001, as a co-researcher on a National Science Council (NSC) project with the title “Reading the images of Foreign Language Text: Energies, Multiple Intelligences, and Hypertext,” I had a chance to do research on the MI of my students. In the research we addressed the problem of teaching the increasing numbers of EFL college students from highly diverse cultural and linguistic backgrounds. However we still did not give much attention to individual language-learner profiles. Applying MI theory and learning to make accurate assessments of our students’ differing demonstrations of intelligence in the language-learning task should be a way “to ensure that educational decisions are made on the basis of an up-to-date profile of the student” (Gardner, 1999,151). In our research, we used the Multiple Intelligences Developmental Assessment Scales (MIDAS) for MI profiling. Through SPSS and SAS statistical analysis, we studied and compared three groups to find out if those taking an elective course in literature in the language department were stronger in linguistic intelligence than those required to take English from other departments, and whether students taking courses in business and tourism were significantly stronger in interpersonal intelligence. The mean average in various intelligences shows those in the language department were stronger in linguistic intelligence than those from other departments; however, three groups’ mean of the scores in interpersonal intelligence was of very slight difference. We discovered that the activity of on-site translation of profile questions from English into Chinese caused the answers to be influenced by what others might think of one’s abilities, rather than what one knows oneself about his/her abilities. Besides, the result addressed cross-cultural aesthetics. For example, Chinese students do not like to say they are really “good” at some skill. For assessment to be valid cross-culturally, we suggest the more radical solution would be a separate test for different cultural and linguistic groups.

Another project, which aimed to promote the foundation education for
university students, was done in our department during the Academic Year 2002-2003. We purchased a courseware, “Tell Me More Pro,” for Freshman English course and installed it in two multimedia language classrooms to facilitate self-directed English learning. Students spent one period per week on the courseware and were encouraged to use the program in their free time. The content of the units is fixed, but students could choose the level of difficulty for themselves. They could learn in a meaningful context at their own pace. The invisible “proficiency profile” is there to help them operate self-directed learning. According to constructivist psychologists, people learn by making meaning. “The learning process is only effective when meaning is constructed by learners themselves (Lachs, 2000, 6). Questionnaire results at the end of the second semester reveal students’ positive affective reaction. They also think the courseware can enhance their pronunciation, conversation, and listening abilities. (Chu 2003). I was with mixed feelings when they gave me a record high score of evaluation for that course. Did the score mean the computer software did a better job than I had done in class? In fact, without many sessions of teacher training and the efforts of collaborative teaching from the teachers in the English Department, their learning from the courseware would not have been possible. After that research experience, I think it is possible for EFL teachers to set up students’ language proficiency profile in the large class through the computer software with multiple-level design. It would be a task worth trying to establish their intelligence profile from collaborative class activities to motivate their learning and make our teaching more effective.

**Literature Review**

In *Intelligence Reframed: Multiple Intelligences for the 21st Century*, Gardner introduced two new intelligences, naturalistic and existential, to the seven original intelligences: logical-mathematical, linguistic, spatial, musical, bodily-kinesthetic, interpersonal, and intrapersonal. As Altan has explained, Gardner continued the argument that

…there are many kinds of minds, labeled as multiple forms of intelligences. The theory of MI is very important to language teachers as it allows them to examine their classroom techniques and assessments in light of individual learner differences…In this book, Gardner offers a newly refined definition of intelligence: ‘an intelligence is 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) … He also warns that the most important task in the new millennium is not to ‘just hone our various intelligences and use them properly, but figure out how intelligence and morality
can work together to create a world in which a great variety of people will want to live’ (p.3). and this observation helps get readers ready for the 10th intelligence, moral intelligence, which Gardner argues, is going to be one of the most valued intelligences of the century, as the world has witnessed many smart people lacking moral values, which has caused other people to suffer.” (204-205).

Gardner stresses the message: Everyone is unique, but we all need to work together to create a better tomorrow. This concept can be implemented in language teaching through the use of collaborative teaching and learning. One of the strengths of collaborative teaching approaches to pedagogy mentioned by Armstrong (1977) is “Team teaching facilitates individualized instruction because it is possible to provide learning environments involving close personal contact between teacher and learner.” Nunan (1992, 3) pointed out the collaborative efforts of teachers, learners and curriculum specialists encouraged learners “to learn about learning, to learn better and to increase their awareness about language, and about self, and hence about learning.” Learners work together in small groups to reach a common goal. The use of computers in the EFL class can activate their multiple intelligences and help achieve their common goal.

**Method and Results**

Freshman English is a 3- hour-a-week required course at the university in which the research was conducted. It is a general course and aims to enhance students’ general abilities in the four skills: listening, speaking, reading and writing. Teachers are free to choose the textbooks to be used in the course. I had two classes of Freshman English; the student number of each class was about fifty. My design is to have two hours in regular classrooms for reading, writing and discussion, and one hour in multimedia classrooms for technological activities in English. At the beginning of fall semester, I asked them to form small groups for class activities with not more than eight members in each group because the maximum number of the computer model system is eight. They were free to include whomever they like for their grouping. However, they needed to choose a leader in their group to help contact other group members and organize their group project. I had the cell phone number of every leader; they had all the numbers of the members of their groups. It was easy to check on individual efforts by calling every leader. Both of the classes had seven small groups. Right after the grouping, I introduced them to some intelligences Dr. Gardner describes and assigned every group to take a turn to present, before and after the midterm, an activity, which could be but did not have to be related to the articles we had discussed in class, using their multiple intelligences. I chose *Rethinking America 1: An Intermediate Cultural Reader* as their reading textbook.
The midterm exam consisted of a speech, a conversation, or a role-play; the final exam, a written test on the reading articles plus a group project of doing voices for a film of their choice. During my office hours, they were welcome to consult me about their preparations and questions. They came to ask about or borrow films for their activities, check their pronunciation, grammar and translation, and make sure the activities were suitable to present in class. I did not want to have intelligence-labeled grouping because “the risks of labeling are patent. Labels can be stimulating, but also confining.” (Gardner 1999, 2) In order to motivate them, I told them the activities accounted for 20% of the course grade, and everyone had an A if they were involved in the teamwork. “Assessment naturally integrates with learning when students demonstrate what they know through project presentations, exhibitions, or other multimodal means.” (Campbell 1999, 336) To make the best use of the computer, I asked them to have all the verbal information on the screen. They could bring a floppy disc, CD ROM or download the data they needed from the internet in class. Besides, every group needed to bring a group photo for their activity, and they had to say something about themselves in the photo. It is difficult to see students’ faces clearly because of the liquid-crystal display in the class. The photo display provided a chance for me and the students to recognize one another in the computer classroom and help promote interaction in class. Students were thrilled to see their photo on the screen and were expected from others to say something about the photo. After the warming up session of the photo introduction, they presented their activities, through multimedia in the classroom. Students from other groups were encouraged to ask questions after their presentations. I asked them questions too, for example, about how much time they spent for preparation. Most of them put more time on the practice of activities than reading preview for class. The following are some examples of their activities.

I. In regard to Linguistic Intelligence, students from different groups:
   A. worked out a poem entitled “Chung-Chi Road” in response to a class article, “America’s Main Street” and read it to the class. Other students could see the poem on the screen.
   B. used General McArthur’s “Prayer for His Son”.
   C. studied Shelley’s “Lover’s Philosophy”.
   D. recited Yeats’ “Down by the Salley Gardens”.
   E. worked with excerpts from Hemingway’s Novel, *The Old Man and the Sea*.

II. Concerning Spatial Intelligence, the class was:
   A. inspired by the comparison of the American flags mentioned in the reader.
Students from different groups used the painting software, “Little Painter” to present their personal ideas of what the national flag should look like to represent what they personally felt about their country. (See Attachments 1, 2)

B. introduced to and encouraged to compare the architecture of western churches and Chinese temples by showing pictures to the class.

C. fascinated by some big cities in the world, found information about them on the net and told the class how to get around.

III. As far as Musical Intelligence was involved, students:

A. designed a popular music webpage. One student personally introduced his webpage to the class and showed a film about a special style of American music called “Scratch”.

B. sang the song, “Amazing Grace”, led by a leader who graduated from a Christian junior college. (See Attachment 3)

C. sang the theme song, “My Heart Will Go On” from the popular movie, Titanic.

D. introduced The Beatles and sang the song “Yellow Submarine”, “I Want To Hold Your Hand” and “Hey, Jude”.

E. told and sang the story, “Tie A Yellow Ribbon Around An Old Oak Tree”.

F. explained the content of a rap song, “Where is the Love?” and showed a music video to the class. Another rap song used was Will Smith’s “Miami”.


H. introduced a British band, Blue, by hooking on a music website.

IV. In terms of Bodily-Kinesthetic Intelligence, the group:

A. presented activities in front of the class. Sometimes they used the computer to play background music and showed videos to facilitate their performance.

B. demonstrated “the Eight Treasures” of Chinese Tai-chi. All the steps were explained in English. (Campbell 1999, 88-89) One student in the group, who has practiced Chinese martial arts for quite a few years, demonstrated the movements filmed in a video disc and showed it to the class. (See Attachments 4, 5)

C. used sign language to perform a song called “1001 Wishes”. The
lyrics were on everyone’s computer screen.

D. used their bodies to create the meaning of English words and asked the class to guess the words. Volunteers were invited to perform, following the group leader’s instruction in English.

E. taught the class how to do the “Penguin Dance” from Germany.

F. sang the theme song of the movie, *Chicago* and danced at the same time. This group spent 8 hours practicing for the activity and really enjoyed it.

G. introduced different kinds of formal dances. Two students performed in front of the class. We named one boy student “Mr. Cha-Cha-Cha” and the other girl student “Miss Rumba” after their show.

V. With respect to Interpersonal Intelligence, the group leaders:

A. called the rest of the partners to discuss their topics and arranged time for group practice.

B. introduced English-learning web programs, in which they have been members

C. videotaped groups’ interviews of their teachers and schoolmates for presentations in class.

VI. As for Intrapersonal Intelligence, all participants:

A. read parts of their diaries concerning the subject of reflection to the class.

B. conducted psychological tests on the analysis of people’s personalities from their sleeping body postures and the first body part they start with when they take a shower.

I did not introduce Logical-Mathematical, Naturalistic, Existential, and Moral Intelligences to them. However, I did find students with some of those intelligences. A few students were good at numbers and problem-solving. One group had a role-play of visiting a zoo; their cell phones had the sounds of different animals for the class to listen to. On St. Patrick’s Day, another group brought a beautiful plant in a specially-designed holder to the class and gave it to me as a gift. Some students enjoyed discussing the meaning of life. In presentations, they talked about reincarnation, ESP, and people who for one reason or another have no mental capacity. I was very impressed with students’ moral intelligence. A few students with higher proficiency in English were so patient that they spent a lot of time teaching those whose English proficiency was much lower than theirs.
As mentioned in the beginning, the final project was doing voices for the films they picked. Every group did a wonderful job and thoroughly enjoyed the activity. They did this by talking into the microphones, and the rest of the class watches films on the screen and listened to their voices at the same time. Some examples of the films they chose were Finding Nemo, Shrek I, Lion King, Moulin Rouge, The Gladiator, Friends, and some Mandarin and Taiwanese drama serials.

Conclusion and Implications

It has been a wonderful experience using the theory of MI in the multimedia classroom. The collaborative pedagogy proved to be effective to promote individualized and student-centered learning. It also helped students to achieve essential tasks of teamwork, especially for large EFL classes. They were highly motivated and showed great affective responses.

This research would have been more convincing if the students had a Chinese version of the MIDAS. It would have helped to discover their intelligences and would have provided aids for EFL teachers to set up their up-to-date profiles, and be able to make assignments to fit the intelligence dominances or needs of the students. We are looking forward to the publication of MIDAS for Chinese students in August, 2005 by Psychological Publishing Company.

Collaborative learning worked better than competitive learning in these two classes. We hope to see more people with moral intelligence to make the world a better place. Of course it would be wonderful for every unique student’s intelligence to be acknowledged and activated. Perhaps collaborative work among different departments in the future will help our students develop their specific intelligences. By doing so we may promote Confucius’ beliefs that we are obliged to “provide education for all people without discrimination” and “teach according to the student’s ability.”
Works Cited


Chu, Janet. 2003. An MOE project report on improving the Freshman English program to Center of Research and Development, Providence University, Taiwan.


THE EIGHT TREASURES

1. Uphold the Heaven with two hands: Begin by bending over with knees slightly bent. Fold fingers of both hands together like a basket and gradually begin straightening up the body, breathing in deeply. When the hands are at waist level, turn palms upward and continue raising arms until they are overhead with palms pressing upwards. When lungs are full, fill them fuller. Unclasp hands, lower arms, and repeat.

2. Open the bow to the left and right: With feet shoulder-width apart, bend knees and hold an imaginary bow in one hand. Place an imaginary arrow on it with the other, and draw across the chest, all the while breathing in deeply. Repeat on other side.

3. Raise the hands separately with one palm up and one palm down: Raise one hand overhead with the palm facing upward, and the other hand down at the side, with the palm facing the floor. Stretch while breathing deeply, then reverse hands and repeat.

4. Looking backwards over both shoulders: Slowly turn one’s head to one side, stretching the eyes as though looking behind you. Breathe in slowly, and breathe out as one’s head returns to the front. Repeat over other shoulder.

5. Hold the fists tightly and gaze with angry eyes: With feet shoulder width apart, bend knees, and bring both fists into the chest. Extend one, breathing out, and widening the eyes. Breathe in as the fist comes back in towards the chest, and repeat with the other fist. (Make sure students are as far apart as possible on this one, and suggest that no one “gaze” at anyone else with the angry eyes!)

6. Jump lightly: Jump up and down on toes ten times, lightly. (Have students imagine they are jumping on clouds, and you’ll be surprised how quietly this can be done.)

7. Shake the head and wave the tail: With feet shoulder width apart, make a circular motion with the upper body, breathing out as you go down one side of the circle, then breathing in as you go up the other side. Repeat several times, then reverse directions.

8. Hold the toes with two hands: Flop over and let the hands hang downwards. Bend the knees slightly, and try to touch toes or go as far down as you can bend easily without straining the back. Breathe in deeply as you come up slowly.
This source is from *Teaching and Learning through Multiple Intelligences* by Linda Campbell, Bruce Campbell and Dee Dickinson.
The theory of multiple intelligences differentiates human intelligence into specific 'modalities', rather than seeing intelligence as dominated by a single general ability. Howard Gardner proposed this model in his 1983 book Frames of Mind: The Theory of Multiple Intelligences. According to the theory, an intelligence 'modality' must fulfill eight criteria: potential for brain isolation by brain damage. place in evolutionary history. presence of core operations. Multiple intelligences, theory of human intelligence first proposed by the psychologist Howard Gardner in his book Frames of Mind (1983). At its core, it is the proposition that individuals have the potential to develop a combination of eight separate intelligences, or spheres of intelligence; that. Senior Director, Renewing Identity Strengthening Evangelization program, Alliance for Catholic Education, University of Notre Dame. Coeditor of Catholic Schools in the United States: An Encyclopedia. See Article History. Multiple intelligences, theory of human intelligence first proposed by the psychologist Howard Gardner in his book Frames of Mind (1983).