Efficient Analysis of Cognitive and Eclectics English learning approaches from the Perspective of Era of Knowledge Economy – an Experimental Study of Preschool Education -

Dr. Han-Kwang Chen, Instructor, JinWen University of Science and Technology, Taiwan

ABSTRACT

More recently with the advent of the era of knowledge economy, the concept of English learning has evolved. Due to this educational diversity and resultant knowledge explosion in the era of knowledge economy, English education for children can be characterized as the way teachers assist children to spontaneously learn by heart.

The aim of this paper is to assess the relationship between efficient English learning methods for children and their language performance from the perspective of new English learning management in the era of knowledge economy. The methodology is composed of the literature review and experimental study as followed:

1. Literature review: psychology theories including cognitive and eclectic theories; the bilingual learning methods of direct method (DM) and audio-visual method (AVM), based upon the fundamental theory of educational psychology.
2. Quantitative research: Assessing relationships between the 2 different language learning methods of the children and their class performance.

A 4-month long experimental project of quantitative research was conducted and the research team organized by the university teachers and teaching assistances made a detailed analysis of variables which contribute to the success of children in learning English. Participants consisted of 45 children from an intensive English language program at a small-size preschool in Taipei County. All subject students began at a basic level and were evenly divided and randomly assigned to the 2 learning groups of cognitive and eclectic programs. The research team was interested in determining which of the 2 bilingual approaches is better at teaching a target language (English) to children.

Through a cross analysis of the relationships between the English learning approaches including the 2 bilingual learning methods and children performances, the study also builds up the framework of efficient English learning models of preschool children. We find that to successfully learn English, teachers and children have to take into account new knowledge learning methods from the viewpoint of knowledge management. English teachers of children should adjust teaching methods and make ongoing learning an integral part of their teaching strategies. Teachers and students alike should actively explore, learn, and create new knowledge.

Keywords: knowledge economy, knowledge management, behavioral learning methods, cognitive learning methods, eclectic learning methods, learning achievement.

INTRODUCTION

The different eras can be characterized by different social living styles and a number of significant changes have occurred in the world. During the previous 3 periods of the 4 developmental stages in
human history, agricultural, industrial and information sciences, students were required merely to recite and duplicate knowledge without emphasizing their capabilities of knowledge innovation and creation. Nowadays, it is the consensus that knowledge is becoming the primary source of economic and academic values; and recently, with the advent of the 4th stage of knowledge economy, the concept of children’s education has evolved. The ways that children learn English are different than the way they used to be.

Due to the educational diversity and knowledge explosion in the era of knowledge economy, education can now be defined as the way teachers assist children to learn and manage knowledge. With many convenient resources available to children these days, such as electronic books, computer based training (CBT), etc., students won’t be satisfied with simple recitation of facts from teachers. In order to help children learn well, teachers must integrate different English teaching methods and search for appropriate new approaches for teaching English. Thus, children’s English teachers should think about how to enhance the efficiency of their pedagogical methods, and in order to achieve this goal, they should understand how students think. (Asher, J. J. 1997, Willis, D. and Willis, J. 2001.)

LITERATURE REVIEW

Nowadays, a number of significant changes have occurred in the world. Although there are differing viewpoints as to what type of society we are moving towards, it seems to be the consensus that knowledge is becoming the primary source of economic and academic values. Truly, the new era of knowledge revolution is based upon the foundation of information knowledge and knowledge management. Under the circumstances, education is becoming more multifaceted, diverse, and knowledgeable.

The different ages can be characterized by different social living styles. During the previous three periods, agricultural, industrial, information sciences, students were required only to recite and duplicate knowledge. At present, in the era of knowledge economy knowledge creation and feedback are emphasized. Still, despite the spread of easy ways to acquire knowledge, teachers instruct students in the ways they were taught themselves, leading to a rehash of old teaching methods from the agricultural and industrial ages. Because of this, some students have been learning through the traditional methods and won’t acquire competitive abilities for themselves.

Further, the knowledge age enhances relationships among countries. Companies become multinational and countries become more international and more cosmopolitan. Outside of the government sphere, organizations need bilingual experts to help them build up good relationships with other firms, making English more important than ever. In the era of knowledge economy, teachers must integrate different English teaching methods and search for appropriate and new approaches for teaching English under the framework of knowledge management to teach students well and meet these new needs.

Concept of Bilingual Learning Management from Theory of Education Psychology

Looking on the educational field from the perspective of knowledge management, English teachers learn about efficient knowledge and from this viewpoint; they adjust their teaching methods and make ongoing learning an integral part of their teaching strategies.

The researchers indicated that major bilingual theories, resulting from the field of educational psychology, are behavioral, cognitive and eclectic approaches. Behaviorists generally believe that students can be taught best when the focus is directly on the content to be taught. Lectures, tutorials,
drills, demonstrations, and other forms of teacher controlled teaching tend to dominate behavioral classrooms. (Elliott, J., 1991, Kemmis, S. & McTaggart, R., 1998) Behavioral bilingual researchers study the effects of stimuli on reflexive behaviors. It involves the acquisition of capabilities that are not innate and learning usually depends on training, stimulation, and experience. (Glisan, E.W. 1995 Hillier, 2002.)

Behavioural bilingual researchers study the effects of stimuli on reflexive behaviours. It involves the acquisition of capabilities that are not innate. It emphasizes on breaking down complex tasks into sub-skills that are taught separately is very common in schools today. Learning usually depends on training, stimulation, and experience. Behavioural bilingual theories fall under the general category of "direct" or "teacher-centered" instruction. (Lee C.Y. & Liou. H. C., 2003. M. & D. Healey, 1998.)

Under the concept of Operant conditioning based upon behaviorism, the audio-lingual method (ALM) is an oral-based approach and it belongs to the behavioral learning method. Audio-Lingual Method includes tutorials, drill and practice, behavioral simulations, and programmed instruction. When children learn English through ALM, they may spend many lessons on phonics skills such as consonant clusters, vowel digraphs, and diphthongs. Other literacy skills such as appropriate uses of the comma may also be taught in separate lessons, often by whole class lectures followed by individual drill activities. (Nunan, D. 2004, Stockley, D., 2006.)

On the contrary, cognitive theory contends that not all cases of learning can easily be captured by classical and operant conditioning modes. Learning would be extremely inefficient if children had to completely rely on classical and operant conditionings for learning. In a comparison of behavioral learning theories which advocate that learning results from pleasant or unpleasant experiences in life, cognitive theories of learning suggest that learning is based upon mental processes. Children are able to learn English more efficiently by finding, creating, thinking, or observation through the mental processes according to cognitive theories. (Huang, C., 2004, Hunt, N. 1993.)

With no recourse to the students’ native language, the meaning of English, the target language, will be conveyed directly through the use of demonstration and the implementation of visual teaching materials. The cognitive English learning approach direct method (D.M.) vehemently opposes teaching with formal grammar and believe that bilingual language learning is more than the learning of rules and the acquisition of imperfect translation skills. In fact, direct method goes far beyond behaviorism’s simple imitation of others. It is a powerful mechanism which provides the meaningfulness of knowledge fitting with the concept of learning in the era of knowledge economy. (Kruidenier J, 2002, Larsen-Freeman)

The direct method (DM) is also known as first language learning, and phonetic Method. Its scholars vehemently oppose teaching with the way of conditional learning. The direct Method has some basic rules including the prohibition of using the native language in classes. (Littlewood, W., 1999, Lindsay A and Gawn J., 2005, Merton B, 2001) They suggest that English education of children is not only learning; with no recourse to the students’ native language, the meaning of English will be conveyed directly through the use of demonstration of visual teaching materials and the implementation of physical response function. The direct method (DM) has a strong theoretical base in linguistics and psychology and this method drills students to naturally use grammatical sentence patterns of English. Teachers stimulate students in order to familiarize them with English. As a result, children can overcome the habits of their native language and form the new habits of English.
Eclecticism- Eclectic English Learning Approach (Combination of DM & ALM)

An eclectic methodology provides flexibility and adaptability. The eclectic teacher aims to achieve "the maximum benefit from all the methods and techniques at teachers’ disposal, according to the special needs and resources of teachers’ requirements of classes”. Language is one of the main areas of development in teaching methods to improve language acquisition. The eclectic teacher selects among a variety of approaches, methods and techniques in order to adequately fit to the needs of a given class at a certain time. (Warschauer Carr, W. & Kemmis S. 1985. Wu, H. Y. 2007..)

Eclectic teachers cannot be limited to a single teaching method, and the teaching method used depends on the specific teaching environment. Thus, in order to achieve good teaching effectiveness, teachers must be experienced in the specific teaching and learning environment, teaching content and student interests and needs, options and comprehensive use of various teaching methods. (Min Zhang, 2009) Because they can absorb a wide range of existing strengths of a variety of teaching methods, a compromise method has its own unique advantage. In teaching, teachers can teach activities as a regulator, to avoid the shortcomings of the traditional teaching methods.

Combining the traditional bilingual ALM (Audio-Lingual Method) approach and the cognitive bilingual DM (Direct Method) approach is a fine example of eclectic bilingual approach. This is a eclectic bilingual approach that, while adding strong behaviorist justification and associated techniques, is indeed a combination of the different emphases of two methodology: the ALM and DM. The following diagram makes clear how these 3 approaches relied and improved upon:

<table>
<thead>
<tr>
<th>Methods</th>
<th>Items</th>
<th>Vocabulary Learning</th>
<th>Listening Comprehension</th>
<th>Oral Expression</th>
<th>Average Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral approach</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audio-lingual method</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive approach</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Direct method</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eclectic approach ALM &amp; DM</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

STUDY METHOD

To gain an understanding of the mainstream classroom teachers’ perspectives regarding bilingual teaching approaches, the research team conducted a 4-month long experimental quantitative project to explore the best characteristics between the 2 English learning methods. All subject children started at the same basic levels and were evenly divided and randomly assigned to the 2 learning groups. Participants consisted of 45 children from an intensive English language program at a small-size preschool in Taipei County and data in this research was collected between 1st October, 2011 and 21st January 2012.

The content of teaching materials was designed by the researcher group. The teaching curriculum was made up of 3 major English skills. Two excellent and qualified teachers were invited to conduct this program by implementing the 2 different teaching approaches. Their educational and teaching backgrounds loosely fit with these 2 different teaching pedagogies and the 2 teachers with 4 teaching assistances are assigned to the 2 children groups: (1) cognitive learning group (2) eclectic group.
Teaching materials were designed by the research team and the curriculum consisted of 3 parts: (1) vocabulary memorization(2) listening comprehension(3) oral expression(4) average performance. The steps of statistical analysis is consisted of (1) Descriptive statistics: (2) statistic T-test.

The experimental research studied and compared the efficiency and advantages between the cognitive and eclectic bilingual approaches under the perspective of knowledge learning. For each language proficiency, there was a pre-test and post-test and all of the examinations would be provided by the research team and carried out by the 2 English teachers and 4 teaching assistances. In addition, the independent variable was designed to be the 2 teaching methods used while the dependent variable would be the learning performances of the 2 student groups.

**CONCLUSION**

Knowledge of English is the most cherished remedy for complexity and uncertainty and it’s the process of translating information and experience into a meaningful set of relationships which are understood and applied. As the process of identifying, acquiring and disseminating the intellectual assets these valuable tools are critical. In order to teach students well and meet these new needs, teachers must integrate different English teaching methods and search for appropriate and novel approaches for teaching English under the framework of knowledge management in the era of knowledge economy.

With the enormous selection of learning technologies available, teachers should enlighten and assist children to develop their ability to learn English. If children merely duplicate teachers’ knowledge, they will lose their creative abilities and they will not be able to innovate or compete with others in their future.

For eclectic theory, the scholars believe that different teaching contexts require different methodologies. Awareness of a range of available techniques will help teachers exploit materials better and manage unexpected situations. Under the eclectic teacher approach, teachers need to use different techniques to hold the children's attention. They attempt to find a good balance of theory and method, combining their strengths with their own teaching needs, which many experts think is wise pedagogy. (Min Zhang, 2009) Also, The eclectic teacher will make his personal choices on the basis of the questions the main issues of language teaching. The use of a variety of ideas and procedures from different existing approaches and methods will increase the chances of learning taking place.

English teachers of both approaches think about how to enhance the efficiency of their pedagogical methods; they realize that in order to achieve this goal, they should understand how students think. In practice however, despite the spread of easy ways to transfer knowledge, teachers instruct students in the ways they were taught themselves, leading to a rehash of old teaching methods from the agricultural and industrial ages. The next table shows the means, standard deviations (S.D.), and correlations of all the variables included in the English learning models:

**Chart 1: the analysis of students’ achievements on different English performances.**

<table>
<thead>
<tr>
<th>Study period before training</th>
<th>Bilingual methodology</th>
<th>Vocabulary memorization mean</th>
<th>S.D.</th>
<th>Listening comprehension mean</th>
<th>S.D.</th>
<th>Oral expression mean</th>
<th>S.D.</th>
<th>Average grades mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I: Cognitive</td>
<td>51.33</td>
<td>9.86</td>
<td></td>
<td>53.13</td>
<td>9.90</td>
<td>48.26</td>
<td>9.66</td>
<td>50.84</td>
<td>9.11</td>
</tr>
<tr>
<td>J: eclecticism</td>
<td>49.20</td>
<td>7.15</td>
<td></td>
<td>52.00</td>
<td>7.00</td>
<td>52.40</td>
<td>4.73</td>
<td>50.95</td>
<td>4.39</td>
</tr>
<tr>
<td>I – J</td>
<td>2.13</td>
<td>–</td>
<td></td>
<td>1.13</td>
<td>–</td>
<td>-4.14</td>
<td>–</td>
<td>-0.11</td>
<td>–</td>
</tr>
</tbody>
</table>
In the 3 items of the pre-tests examining the participant children before the experimental study was conducted, the analyzed data indicated that there was no statistically significant difference in English proficiency between the 2 groups. That is, the participant children in this study showed equal starting capabilities in English. Furthermore, all subject participants were evenly divided and randomly assigned to the 2 learning groups.

The following figures demonstrates the pre-test of participate children’s performance on (1) vocabulary memorization, (2) listening comprehension, (3) oral expression, (4) average performance, between this 2 English learning groups.

**Figure 1: students’ pre-test performance of 2 English learning groups.**
(cognitive left, eclecticism: right)

The following figures demonstrates the post-test of participate children’s performance on (1) vocabulary memorization (2) listening comprehension (3) oral expression (4) average performance, between this 2 English learning groups.
The result of this study shows us the applicability of various bilingual teaching methods to real-world situations in children’s education. The eclectic method is best for vocabulary, memorization, which directly applies to many kinds of standardized testing that focus on memorization for them studying at elementary and junior high in their future. In contrast, the cognitive method specializes in listening comprehension and oral expression, making it especially suited to scenarios which require free-form response or the occasions which children should listen or speak. The eclectic method provides a third option for teachers because it fuses elements from traditional and cognitive methods to deliver on the strengths of both.

Educational diversity is the trend of the future. It includes content integration, knowledge construction, prejudice reduction, equity pedagogy, and empowerment of competitive aptitudes. To accommodate these changes, teachers need a new way of thinking. The concept of bilingual knowledge learning has evolved towards a vision based more on management and creation rather than one based on learning only. Still, how to apply them to bilingual learning is a new concept and continually inspires teachers to move forward.

In practice, however, despite the spread of easy ways to transfer knowledge, teachers instruct students in the ways they were taught themselves, leading to a rehash of old teaching methods from the agricultural and industrial ages. Teachers should help children learn by thinking about, controlling, and effectively using their own mental processes. Cognitive learning helps children process new information by taking advantage of knowledge and aptitudes that children already have. Under the principles of cognitive theory, knowledge that makes sense and has significance to children is more meaningful than inert knowledge and knowledge learned by rote. According to schema theory, children’s meaningful knowledge is constructed of networks and hierarchies of schemata.
In conclusion, teachers cannot simply assume that children will be able to transfer their school learning to practical situations, so teachers must teach them how to manipulate knowledge instead of reciting knowledge. Children need to be offered specific instruction by teachers in how to use their knowledge to solve problems and to use skills in situations like those they are likely to encounter in real life or in other scenes in which teachers expect learning to transfer to.

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