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## Comparative Study of English Teaching and Learning at Graduate Level by Direct Teaching, Self-Instruction and Personalizing Instruction<sup>\*1</sup>

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### Abstract

This two-phased research aimed at discovering the effects of the three teaching-learning approaches of the title on English performance, and at relating students characteristics to their language learning ability. Analyses of variance and co-variance revealed that teaching approaches and some personality and attitudinal-motivational variables were related to student learning achievement.

### Introduction

In preparation for the English courses to be offered at the graduate level, this research project was conducted by a team of researchers from the Chulalongkorn University Language Institute with a research grant from the Thai government.

### Background of the Problems and Rationale for the Study

Beginning in the middle of the 1970's to the early 1980's individualized instruction was the approach widely recognized and adopted for language classes. Many studies both at home and abroad came up with favourable findings for individualized instruction. Mossman (1974) conducted a comparative study with 869 grade school students from three schools in Arkansas. In the study there were 22 experimental classes using individualized instruction and 19 controlled

classes. It was discovered that the experimental group could read significantly better than the control group. A Californian study conducted by Stacy (1975) led to the same findings.

The ILLP (Individualized Language Learning Project) by Aiken and Bachman (1977) started in 1972 with elementary school students in Khon Kaen--three schools comprised the control group using the traditional Oxford English for Thailand series, the other three experimental schools used the Jacaranda Individualized Language Arts Program Series I. During and after the four years of experimentation, the Central Institute of English Language collected data on students achievement in English and attitudes by using various testing instruments. The research revealed that the students in the experimental group had faster progress in listening and speaking in the first year

and in reading, writing and grammar in the second year. The experimental group had a broader knowledge in the subject matter as well as in the self-study techniques. Another study done at the Chulalongkorn University (C.U.) Demonstration School, on the contrary, discovered that students in the individualized study group had the same level of English skills as those using the ordinary approach. The experimental students, however, appeared to be very interested in the lessons, and better in expressing themselves. Besides they came to class regularly; at the same time the weak students who progressed slowly did not exhibit any stress or strain in learning. The results of the control and experimental groups achieving the same learning outcome were interpreted as stemming from the fact that the C.U. Demonstration School had already given the students the chance to be involved in their own learning and that the school no longer used the strict traditional approach in which the teachers were always in the center of the classroom but had already started to use a learner-centered approach.

With regard to the learner variables, namely attitudes and motivation, the impact of these two variables were repeatedly discovered to be significantly related to language learning as contributing factors (Lambert and Gardner, 1972; Scherer and Wertheimer, 1964). The influence of personality factors on language learning has also been investigated in various studies but under different aspects, such as egocentricity, empathy, egopermeability (Kannwischer, 1968), etc. The studies indicated that those who were not ethnocentric (Lambert et al., 1963; Northeast Conference Report, 1970), could adjust better to other cultures and

could accept the values of people using the target language and would learn the language well. Other personality types widely studied were extroverts and introverts. Jung (1959), Eysenck (1963), Broadbent (1958), Bakan (1959) and Lynn and Gordon (1961) stated the superiority of the introverts over the extroverts in abstract thinking, individualism, self-control, inquisitiveness, self-study, learning achievement, and immediacy of responses in a controlled situation. Byrne (1966) compared the performance in an extra-curricular program of the two groups; he discovered that the introverts could perform better in individualized tasks, whereas the extroverts did better in group-interaction tasks.

### The Study

The research had two phases. Phase I was conducted over a period of one month, one hour a day of learning whereas Phase II was an intensive program lasting five days, five hours a day of learning.

The objectives of the research were as follows:

1. To discover which of the three following approaches would be most appropriate and most effective for graduate English courses:

- 1.1 Direct teaching with the instructor solely directing the student learning activities.

- 1.2 Self-instruction with the students taking the self-study lessons solely by themselves. The teacher would be present in class only to answer questions or solve problems which were student-directed. The subjects were also provided with dictionaries to aid their learning.

1.3 Personalizing instruction with the students choosing whether to study with the teacher or to study by themselves as well as selecting which unit to study according to their own preferences.

2. To study the factors related to learning and teaching under the three approaches, namely,

2.1 Student personality

2.2 Student motivation

2.3 Student attitudes

2.4 Student English proficiency

The research conducted during the academic year 1983 had two phases; in Phase I the subjects were 69 graduate students enrolled in the first semester in the Faculties of Education (22), Engineering (28), Architecture (7), and Science (12); in Phase II the subjects were 27 graduate students enrolled in the summer session in the Faculties of Commerce and Accountancy (12), Pharmacy (7), Science (6) and Engineering (2). The subjects in both phases volunteered to take part in the experiment.

The two phases employed exactly the same instruments and research procedures. The instruments consisted of English lessons with emphases on reading, grammar, language functions and writing respectively, and three test batteries.

**The English Lessons :** The lessons were in two levels. Level I was aimed at practising study skills of reading selected from "Selections for Developing English Language Skills" by Finocchiaro and Lavenda (1973). Level II was composed of English for Academic/Professional Purposes divided into two strands--the science strand and the non-science strand--to fit the learners in both disciplines. The lessons were selected from various commercial texts, e.g. "Core English

for General Science" by Stares (1980) and "Computers" by Humbly and Robinson (1978). A set of answer keys to the lessons was developed for the self-instruction group.

**The Test Batteries :** The instruments were constructed, tried out and improved until they became standardized. The batteries were composed of attitudes towards learning English in general, attitudes towards learning through direct teaching, self-instruction and personalizing instruction, and motivational intensity scales. The Eysenck Personality Inventory Form A (Eysenck & Eysenck, 1963) was translated into Thai by the researchers to measure the four personality types, namely, neurotics (N), extrovert (E), introvert (I), and lie (L). An achievement test was also constructed to measure the subjects' achievement in reading and writing English.

A standardized cloze test was used to measure the subjects' English proficiency before the experiment started.

The two phases followed the same research procedures which were put in the following steps :

**Step I :** The subjects were divided into three groups having the same level of English proficiency proven by the mean cloze test scores which were not statistically different at the .05 level of significance.

**Step II :** Each group studied the lessons under each approach. In Phase I, the subjects took the lessons one hour a day over a period of one month. Nine teachers rotated to conduct classes for each group with approximately

equal amount of hours in order to minimize the teacher's effects. In Phase II the subjects intensively took the lessons five hours a day for a period of five days. The six teachers involved also took turns conducting each group to minimize the teacher's effects.

**Step III :** When fifty per cent of the lessons were completed, questionnaires measuring attitudes towards learning English in general, attitudes towards learning via direct teaching, via self-instruction and via personalizing instruction were administered together with the personality inventory and the motivational intensity scales.

**Step IV :** At the end of the experiments (27 hours in Phase I and 25 hours in Phase II), the achievement test was administered to all the subjects.

Statistical analyses for both phases comprised :

(1) Analysis of variance (ANOVA) to find out the relationships between the three learning approaches and learning achievement, and the relationships between attitudes towards learning English via the three approaches and learning achievement.

(2) Analysis of covariance (ANCOVA) to find out the relationships between the attitudinal-motivational covariates and learning achievement.

(3) Multiple regression analysis to establish the predictive relationships between the above mentioned variables and learning achievement.

(4) Pearson product moment correlation to establish interrelationships among all the variables.

To report the results of the analyses, the following abbreviations were used for the independent and dependent variables :

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#### **Independent Variables**

DT = Direct Teaching  
 SI = Self Instruction  
 PI = Personalizing Instruction  
 ATT = Attitudes towards learning English in general  
 ATA = Attitudes towards learning English via Direct Teaching  
 ATB = Attitudes towards learning English via Self-Instruction  
 ATC = Attitudes towards learning English via Personalizing Instruction

N = Neuroticism

E = Extrovert

I = Introvert

L = Lie

MOT = Motivational Intensity

#### **Dependent Variables**

ACH = English achievement

**ANOVA** To determine the significance of the differences of English achievement of the subjects learning English via DT, SI and PI.

<b>Phase I</b>					
		$\bar{X}$	SD		
	DT	22.423	1.462		
	SI	19.000	6.261		
	PI	13.286	3.302		

  

Source	DF	Sum of Squares	Mean Squares	F-Ratio	F-Prob
Between Groups	2	298.056	149.028	7.215**	0.0054
Within Groups	17	351.143	20.656		
Total	19	649.199			

(\*\* signifies statistical significance at .01)

The table revealed that the differences were significant at 0.0054. The Scheffé Test performed on the three groups indicated that learning English via DT was significantly better than via PI. However SI and PI groups were not different in English achievement.

<b>Phase II</b>					
		$\bar{X}$	SD		
	DT	27.286	2.360		
	SI	15.667	4.633		
	PI	27.000	1.927		

  

Source	DF	Sum of Squares	Mean Squares	F-Ratio	F-Prob
Between Groups	2	563.813	281.907	30.429**	0.000
Within Groups	18	166.762	9.265		
Total	20	730.575			

The table confirmed the findings in Phase I that learning English via the three approaches yielded significantly different results in achievement. The Scheffé Test indicated that the DT and PI groups did significantly better than the SI group.

### **Conclusion**

We could thus conclude that DT was the most effective approach for the subjects in both phases, whereas PI was effective for the intensive group in Phase II, but not for the regular group in Phase I. It was obvious that SI could not compete with DT in both experiments.

ANCOVA To determine the co-variances of the attitudinal-motivational variables with learning achievement.

Source of Variation	Sum of Squares	D.F.	Mean Square	F	Signif of F
Covariates	621.921	5	124.384	6.022**	0.004
ATT	59.404	1	59.404	2.876	0.114
MOT	123.015	1	123.015	5.955*	0.030
ATA	45.813	1	45.813	2.218	0.160
ATB	1.300	1	1.300	0.063	0.806
ATC	88.695	1	88.695	4.294	0.059
Main effects	694.786	2	347.393	16.818	0.000
GP	694.786	2	347.393	16.818	0.000
Explained	1316.708	7	188.101	9.106	
Residual	268.529	13	20.656		
Total	1585.237	20	79.262		

(\* signifies statistical significance at .05)

It was only in Phase II that the ANCOVA yielded the significant relationships of these variables with English achievement. The covariates were significant at 0.004 (F ratio = 6.002, DF = 5). The specific variable significantly related to English achievement was MOT ( $p = 0.030$ , F Ratio = 5.955, DF = 1)

### Conclusion

The attitudinal-motivational variables were covariates significantly related to English achievement, with MOT as the most significant variable as confirmed by Phase II results.

### Multiple Regression

To establish the predictive relationships between the independent variables and the dependent variable, multiple regression analyses yielded the following equations which were significant at 0.05

#### Phase I

$$\hat{Y} (ACH) = 23 + 2 \text{ ATC} + 3L + (-1) \text{ ATT}$$

$$\text{Beta } L = 0.736, \text{ ATC} = 0.644, \text{ ATT} = -0.634$$

The Lie Personality scale appeared to have the strongest predictive relationship, followed by attitudes toward learning via personalizing instruction and attitudes towards learning English in general.

**Phase II**

$$\hat{Y} \text{ (ACH)} = 41.5683 + 1.273 \text{ MOT} + (-1.620) \text{ E} + (-2.989) \text{ L} + (-0.743) \text{ ATC}$$

$$\text{Beta MOT} = 0.414, \text{ ATC} = -0.622$$

$$\text{E} = -0.758, \text{ L} = -1.000$$

In Phase II, MOT had the strongest relationship with ACH, followed by ATC, E and L respectively.

**Conclusion**

Multiple regression analyses in both phases confirmed the predictive relationships of attitudes towards learning English via personalizing instruction, and lie personality with English achievement. Motivational intensity in Phase II appeared to have the strongest relationship, thus, confirming the ANCOVA findings in Phase II.

**Pearson-Product Moment Correlations**

The inter-correlations among the variables reported here were only of the pairs which were significantly correlated.

**Phase I**

- |                |              |
|----------------|--------------|
| 1. ATA and ATB | $r = -0.449$ |
|                | $r^2 = 20\%$ |
| 2. ATB and L   | $r = -0.341$ |
|                | $r^2 = 12\%$ |

**Phase II**

- |             |              |
|-------------|--------------|
| ATA and ATB | $r = -0.449$ |
|             | $r^2 = 20\%$ |

**Conclusion**

The negative correlations between attitudes towards learning English via Direct Teaching and via Self-Instruction were of the same value in both phases. It could be concluded that those who had good attitudes towards DT would consistently have bad attitudes towards SI. Those who had Lie Personality would also have low attitudes towards learning English via SI, as indicated in Phase I analysis.

**Conclusions, Implications, and Recommendations****Conclusions**

The research findings led the researchers to conclude that:

- (1) Learning English within a short amount of time (27 hours in Phase I) and within a short span of time (5 days, 25 hours in Phase II) would be most successful via Direct Teaching.

(2) Attitudinal-motivational covariates were significantly related to learning achievement, with motivational intensity as the strongest factor.

3. Personality-attitudinal-motivational variables had predictive relationships with learning achievement. Again motivational intensity exhibited the strongest predictive power. The Lie and Extrovert Personality Scales also had predictive relationships, as well as the attitudes towards learning English via Personalizing Instruction.

(5) Those who had good attitudes towards learning English via Direct Teaching would consistently have bad attitudes towards learning English via Self-Instruction

#### **Implications and Recommendations**

(I) Those who had good attitudes towards personalizing instruction would learn English better than those who did not. At the graduate level, freedom of choice of lessons and mode of instruction should be implemented. In other words the students should be able to select the lessons and learning approaches suitable for their fields of study and their style of seeking knowledge. The findings of Phase I that SI group had the lowest mean achievement score might be due to the fact that the group gradually paid less attention to the learning experiment and many did not regularly attend classes. The classes were during lunch time and probably could not hold the subjects' interest without the teachers' control, unlike the DT group.

(II) Even though personalizing instruction has been recommended, direct teaching should play a significant role in the program. This means that the program designers or the teachers should consider the amount

of time for the course, the types of materials to be used and the student proficiency. If the time is short as in the research, direct teaching may be very fruitful for students who are not proficient. However, for a better group of students who study English within a longer span of time or for a greater amount of time and materials, personalizing instruction may be a very promising means of instruction.

(III) In a normal program, the teaching-learning processes should not overlook direct teaching. This approach may very well be adopted at particular points, for example, in the explanation of some language points and in solving the students' learning problems. Explanations at certain parts of the lessons for adult learners, if not done excessively and as an interplay with personalizing instruction, may lead the learners to success.

(IV) Personality factors found to be negatively related to English achievement were lie personality and extrovert indicating that those who appeared to be untruthful might not understand the language of the lessons well, in the same way as those who score high on the extrovert scales might not have enough self-control or determination demanded of the learning tasks within a short span and a short amount of time as in the research.

(V) Motivational intensity is very important. It is obvious that motivated students are high achievers. Teachers, therefore, should attempt at motivating each and every student to learn the language. Good attitudes are strongly related to motivation. Classroom atmosphere and out-of-class constructive relationships among teachers and students are crucial. From elementary to graduate



levels, motivation plays an important role in language learning achievement. This factor should never be overlooked.

(VI) Further research should be conducted with students in normal classes. The

research should be process-oriented rather than product-oriented. Continuous, observational and qualitative methods of data collection should be employed.

### Notes

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In addition, this paper was presented at the Eighth Thai/TESOL Convention, January 22-24, 1988.

### The Author

Achara Wongsothorn had worked at the Faculty of Arts, Chulalongkorn University and at the Central Institute of English Language, Ministry of University Affairs before she joined CULI. She has contributed several articles to PASAA and is interested in language testing and research. Presently she is Associate Professor and Deputy Director for National Academic Affairs and Foreign Relations of CULI. She is also serving as Vice Chairman of the National Co-ordination Committee for RELC Affairs.

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