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SURANAREE UNIVERSITY OF TECHNOLOGY

RESEARCH REPORT

EFFECTIVENESS OF SURANAREE UNIVERSITY'S
ENGLISH PLACEMENT TEST

SURANAREE UNIVERSITY OF TECHNOLOGY-FUNDED PROJECT

CONTRIBUTION

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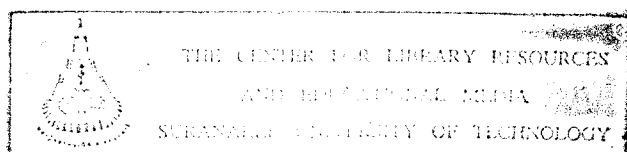


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Preface

Placement is an important element in most language programs since it is necessary to place students with relatively homogeneous language-ability into an appropriate level prior to the beginning of instructions. Suranaree University of Technology's School of English believes that an effective in-house English Placement Test, rather than commercial ones, should be used as a placement tool. Once placement decisions are made, it is essential to find out whether they are accurate.

The researcher aims to conduct an item analysis of the 1997 English Placement Test, assess the test's quality, and investigate whether the placements are correct. It is also expected that the outcomes of the study will be useful for future placements.

Siriluck Usaha

บทคัดย่อ

ประสิทธิภาพของข้อสอบ English Placement Test ของมหาวิทยาลัยเทคโนโลยีสุรนารี

สาขาวิชาภาษาอังกฤษจัดให้มีการสอบเพื่อจัดแบ่งชั้นเรียนตามความสามารถทางภาษาอังกฤษของนักศึกษาชั้นปีที่ 1 ทุกปีการศึกษา โดยใช้ข้อสอบซึ่งสาขาวิชาฯ สร้างขึ้น (English Placement Test) ประกอบด้วยข้อสอบแบบปรนัย 100 ข้อ เวลาสอบ 2 ชั่วโมง การวิจัยครั้งนี้มีจุดมุ่งหมายเพื่อวิเคราะห์ข้อสอบรายข้อ โดยหาค่าอำนาจจำแนกและค่าความเชื่อมั่น และเพื่อทดสอบความถูกต้องในการจัดแบ่งชั้นเรียนตามผลการสอบดังกล่าว กลุ่มตัวอย่างได้แก่นักศึกษาชั้นปีที่ 1/2540 จำนวน 1,224 คน ซึ่งถูกจัดให้เข้าเรียนรายวิชาภาษาอังกฤษ 5 กลุ่ม (ภาษาอังกฤษ 1-5) ระหว่างภาคเรียนที่ 1/2540-2/2542 กลุ่มตัวอย่างมีผลการเรียนรายวิชาภาษาอังกฤษ 4 เป็นอย่างน้อย

ผลการวิเคราะห์ข้อสอบโดยใช้ Classical Test Item Analysis Grading Program พบว่า ข้อสอบ English Placement Test มีอำนาจจำแนกและค่าความเชื่อมั่นอยู่ในระดับค่อนข้างสูง ผลการสอบดังกล่าวของกลุ่มตัวอย่างมีความสัมพันธ์เชิงบวกกับผลสัมฤทธิ์ทางการเรียนรายวิชาภาษาอังกฤษทุกรายวิชา ยกเว้นรายวิชาภาษาอังกฤษ 1 และ เมื่อเปรียบเทียบคะแนนผลสัมฤทธิ์ทางการเรียนแต่ละรายวิชาภาษาอังกฤษระหว่างกลุ่มตัวอย่างพบว่า กลุ่มที่ถูกจัดให้เรียนในระดับสูงมีผลสัมฤทธิ์ทางการเรียนสูงกว่ากลุ่มอื่น ๆ ดังนั้นจึงสรุปได้ว่า English Placement Test มีประสิทธิภาพในการจัดแบ่งชั้นเรียนตามความสามารถทางภาษาอังกฤษ ของผู้เรียน

Abstract

English placement testing is commonly conducted at the beginning of each academic year to determine which level of study would be most appropriate. However, the question is whether the in-house English placement test is an effective instrument for placement decisions. The present study aimed to assess the quality of the existing English placement test and to investigate whether the placement decisions were accurate. The 2-hour 100-item multiple-choice placement test was administered to all first year engineering and agricultural technology students (N=1,224) prior to the start of their studies. The subjects were placed into 5 proficiency levels. The placement test results were analyzed using the Classical Test Item Analysis and Grading program. Each individual test item was evaluated in terms of difficulty level and discriminating power, and the whole test was described in terms of validity and reliability. A follow up on students' progress revealed that their English course achievement scores correlated significantly with their English placement test scores. Comparisons of achievement scores in three courses taken by all placement groups showed that those placed into higher proficiency levels scored significantly higher than those placed into lower proficiency levels. It was concluded that the English placement test was an effective tool and that the placements were accurate.

Acknowledgement

The researcher owed special thanks to Suranaree University of Technology for funding the study and to the Center for Educational Services for all the data on the students' test scores. Assistance in statistical analyses provided by Sureporn Siriman, Sunida Kittisrithananun, and Supatra Wanapu, the university's test specialists, was highly appreciated.

Siriluck Usaha

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Chapter 1

Introduction

Background and Rationale

Placement is an important element in most language programs since it is necessary to sort students into relatively homogeneous language-ability groupings and place them into an appropriate level that fits their true language proficiency prior to the start of instruction (Brown, 1989). Literature in ESL placements shows that various methods are used for this purpose. Some institutes employ self-report procedures that require students to rate their ability “to do” certain things using their L2, according to Wesche, Paribakht, and Ready (1996) who point out that self-assessments are subject to poor reliabilities. The use of tests that require students to perform language tasks for placement of students has now become a normal practice.

Placement tests bought from commercially publishing houses, adapted, or totally taken out of ELS textbooks, are being used in some institutions, but they post some problems, especially in terms of validity and reliability, which are dependent upon who the testees are, their cultural background, ranges of their language ability, where the tests are administered, for instance. A comparative study of four ESL placement instruments carried out in Canada to examine which was the most effective revealed that “tests which have been shown to work well in one context cannot be assumed to be appropriate in a seemingly similarly new context” (Wesche, Paribakht, and Ready, 1996, p. 208). The researchers strongly recommended that tests developed for local needs and normed on representative populations were needed for adequate placement in courses. Hughes (1996) also stated that no one placement test will work well for every institution and that those most successful were “the ones constructed for particular situations. They depend upon the identification of the key features at different levels of teaching in the institutions. They are tailor-made ... This usually means that they have been produced ‘in house.’” (p. 14).

Placement test decisions are not any less important than other types of decisions based on the use of testing. They affect both individuals, which are referred to as “micro evaluation” and the program, or “macro evaluation” by Bachman (1995). Inaccurate placements, based on scores from tests of low quality and their interpretations, normally result in frustrated students and teachers alike, say Wesche, Paribakht, and Ready (1996). If students are placed at a higher level than their actual proficiency, they will not be able to follow the course, suffer from worries and unintentional intimidation, through the course, or even fail it in the end. Better students in the class will equally be tortured from boredom, and their teacher will find it very difficult to accommodate students with heterogeneous language ability groups at the same time. In short, no one will benefit from this situation. Similarly, if students are placed at a lower level than their true ability, they will certainly waste their time and money and a good opportunity to take more advanced courses to enhance their language experience. Poor placements also mean a waste of time, efforts, and budget for the institutions. It is obvious that losses caused by wrong

placement decisions are definitely too costly. In their efforts for correct placements, tests developers often face with two practical questions: (1) how valid and reliable is a placement test and (2) how do we know that students are correctly placed? The university where this research was conducted is still facing these same problems.

Suranaree University of Technology's English Program

As the name implies, Suranaree University of Technology is a specialized university whose main missions are to train high level scientific and technical personnel who can use English for academic purposes while undertaking course of studies, and upon graduation, can use the language for international communication and for professional self-development (SUT, 1998). Acknowledging the university's technological foundations, the School of English provides a 15-credit (5 courses) EAP language program that matches the educational and professional needs of the students. Because it also realizes that all new students generally enter the university from different English backgrounds and prior language learning experiences, the School runs a 2-hour placement test at the beginning of each academic year in order to make sure that they are placed into the level that fits their English language proficiency levels. Students are placed into either English I, English II, English III, English IV, or English V, according to their test scores. Students who are placed into English I complete English I to English V as their 15 English course credits. Those placed into English III would complete English III to English V plus two elective English courses. According to Burgess and Owen (1997), the students are advised to score as high as possible on the English placement exam as the lower level English courses are the most demanding and focused courses. The elective courses offer a wider range of opportunity and scope for language development in areas that reflect students' personal interests.

Suranaree University of Technology's English Placement Test

In our attempts for accurate placements, the School of English has chosen the locally produced, tailor-made test approach. The 1997 English placement test was the result of continuous test development efforts that began in 1994 when the University began to admit its first group of students. However, it was not until 1997 that an empirical investigation of our placement test was made.

Based on Hughes' theoretical principles of steps in test construction (1996), the 1997 English Placement Test was constructed for the purpose of assigning new students to classes of 5 levels: English I, II, III, IV, and V. Since it aimed to assess the students' high school English proficiency as well as their ability to succeed in following the SUT's English program, both objectives of Thai high school English curriculum and SUT's course objectives of English I-IV were taken into account for the test specifications. The test was a 2-hour, 100-item 4-option multiple-choice test to be computer-graded overnight since the placement results were to be announced on the following day. The test consisted of 4 sections: (1) Listening, 25 questions, (2) Reading and Vocabulary, 40 questions, (3) Speaking, 10 questions, and (4) Grammar and Written Expressions, 25 questions.

In Section 1, students listened to conversations, directions, and mini, academic lectures. Section 2 measured students' micro-skills of skimming and scanning for

topics, main ideas, and supporting details, predicting, identifying referents of pronouns, inferring, concluding, recognizing indicators in discourse for different parts of text, and using context to guess meaning of unfamiliar words. Texts varied in formats and lengths. This section also assessed students' knowledge of active, general lexicon items in science and technology frequently found in English I, II, III, and IV. All the vocabulary words tested were in contexts and in the formats of sentence context, gap filling, and modified cloze. Section 3, Speaking, measured students' ability to use appropriate language in carrying on conversations in various situations. The last section, Section 4, Grammar and Written Expressions, asked students to identify parts of speech and sentence structures, organize given sentences into paragraphs of different discourse patterns, and choose paraphrases and summaries to given texts.

The "cutting" scores, based on the School of English's placement experience, were as follows:

English V	90 up
English IV	71-89
English III	58-70
English II	40-57
English I	0-39

From a total of 1,224 students who took the 1997 English Placement Test, 365 were placed into English I, 591, English II, 197, English III, 58, English IV, and 4, English V. The other 9 students did not show up for enrollment.

Purposes of Research

The present study, carried out from June 1997 to December 1999, sought to make an item analysis of the 1997 English Placement of Suranaree University of Technology and to investigate its quality, that is, whether the test was valid and reliable. It also aimed to find out whether the 1997 in-take students were placed appropriately to their English ability.

Research Questions

The following questions guided the research:

1. What were the characteristics of the 1997 test items in terms of item difficulty and item discrimination?
2. Was the 1997 English Placement Test a valid and reliable instrument for Suranaree University of Technology?
3. Was the 1997 English Placement Test effective in placing first year students into 5 different levels? In other words, were the placements accurate?

Scope of the Research

The present study was engaged in the following:

1. The item analysis of the Suranaree University of Technology's 1997 English Placement Test.
2. The assessment of the quality of the Suranaree University of Technology's 1997 English Placement Test
3. The subjects of the study were 1,224 first year students who took the placement test and were enrolled for English I-V from June 1997 to December 1999 (8 trimesters). The relationships between their placement scores and their English I-V scores were analyzed to determine placement accuracy.

Basic Assumptions

1. The 1997 English Placement Test was a norm-referenced proficiency test designed to measure Thai high school graduates' overall English mastery as well as their ability to succeed in the SUT English for academic program.
2. English IV achievement scores were considered the subjects' final "outcome," or the final events, observed after the placement decisions.
3. The cutting/cutoff scores for English I, II, III, IV, and V were based on the School of English's previous placement observations before this study.
4. It was assumed that the English II, III, and IV course achievement tests administered during the period of the study were not different.
5. Given a congruence in content and given that English I, II, III, and IV course grades are valid measures of educational achievement, there should be a statistical relationship between placement scores and course achievement scores.

Expected Outcomes

It was expected that the following objectives would be achieved:

1. An effective English placement test would be constructed for accurate placement decisions for SUT.
2. Parallel English placement tests would be constructed for future use.
3. The present research would provide insights into SUT's English course improvement.
4. The present study would lead to further investigations of SUT's placement instruments for more accurate placement decisions.

Chapter 2

Research Procedures

Since the purposes of this research were to conduct an item analysis of the Suranaree University of Technology's 1997 English Placement Test, to assess the quality of the test, and to find out whether the 1997 placements were accurate, each was dealt with separately.

I. Item Analysis of the 1997 English Placement Test

Sources and Collection of Data

The 1,224 first year students' English Placement Test scores, both total scores and each sub-test scores, were assembled and kept in a computer at the University's Center for Educational Services.

Analysis of Data

Since placement decisions were based on the test results, it was necessary to look into each individual item of the 100-item 4-option English placement test to see how easy (or difficult) it was from the viewpoint of the examinees taking the test. As stated by Oller (1979), a test item that was too easy or one that was too difficult could tell us nothing about the differences in ability within the test population. Therefore, desirable items should be those that yielded as much variance in scores among the examinees as possible, the items of middle difficulty. In addition, good test items must be able to separate the "high" students from the "low" students. To find out whether the English placement test items were "good" items, the following steps were taken:

1. Calculated difficulty index and discrimination index of each test item by using the Classical Test Item Analysis and Grading program (CTIA/Grading) with 27% upper and lower groups (Sukamonsan, 1995).
2. Described each individual test item in terms of item difficulty (p) and item discrimination (r).
3. Evaluated the items.

II. Assessment of the Quality of the 1997 English Placement Test

The following steps were taken to assess the quality of the test:

1. Obtained the descriptive statistics from the 1997 placement scores, namely the mean score, maximum score, minimum score, and standard deviation, to get a picture of overall group performance.

2. Examined the test's content validity and construct validity and described each.
3. Estimated the test's reliability by using the KR-20 internal consistency method (Sukamonsan, 1995). The formula used was

$$KR_{20} = \frac{k}{k-1} \left[1 - \frac{\sum p_i q_i}{S.D._t^2} \right]$$

Where

k	=	number of test items
p _i	=	proportion of correct responses to item i
q _i	=	proportion of incorrect response to item i or (1 - p _i)
S.D. _t ²	=	variance of the scores on the test

4. Calculated the standard error of measurement using the formula

$$SEM = S.D. \sqrt{(1 - r_{xx})}$$

where	SEM	=	standard error of measurement
	S.D.	=	standard deviation of the scores
	r _{xx}	=	the KR-20 reliability value

(Sukamonsan, 1995)

III. Placement Accuracy

To determine whether the 1997 students were placement accurately into appropriate English proficiency levels, the following steps were taken:

1. Examined how the subjects' placement scores were related to the achievement scores of their English I, II, III, and IV courses using Pearson's Product Moment Correlation (Kleinbaum, Kupper, and Muller, 1988). The formula used was

$$\text{Coefficient of Correlation of } x,y ; r_{xy} = \frac{S_{xy}}{S_x S_y}$$

When n = sample size

$$S_{xy} = \sum x_i y_i - \frac{\sum x_i \sum y_i}{n}$$

$$S_{xx} = \sum x_i^2 - \frac{(\sum x_i)^2}{n} ; S_x = \sqrt{S_{xx}}$$

$$S_{yy} = \sum y_i^2 - \frac{(\sum y_i)^2}{n} ; S_y = \sqrt{S_{yy}}$$

Correlation coefficient as a measure of association was interpreted as follows:

1. If r is close to 1, there is strong positive association.
 2. If r is close to -1 , there is strong negative association.
 3. If r is close to 0, there is no association.
2. Compared the subjects' English II, III, and IV achievement scores among different placement groups using t-test with two normally distributed populations and F-test with more than two populations. The population variances are assumed to be equal. The formulas used were:

T-test

Hypothesis : $H_0 : \mu_1 = \mu_2$

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\text{var}(\bar{X}_1 - \bar{X}_2)}} , \text{ degrees of freedom} = v$$

when \bar{X}_1, \bar{X}_2 = means of placement groups 1 & 2
 $\text{var}(\bar{X}_1 - \bar{X}_2)$ = variance of $(\bar{X}_1 - \bar{X}_2)$
 v = $n_1 + n_2 - 2$

If the null hypothesis is accepted, it means there is no difference between the mean scores of the two placement groups' course achievement scores. By contrast, if it is rejected, it means there is a difference between the mean scores.

F-test

Hypothesis : $H_0 : \mu_1 = \mu_2 = \dots = \mu_k$

$$F = \frac{MS_t}{MS_e}, \text{ degree of freedom} = n-1$$

when

MS_t = mean square of treatment

$$= \frac{SS_t}{k-1}$$

MS_e = mean square of error

$$= \frac{SS_e}{n-k}$$

SS_t = sum of square of treatment

$$= \sum \frac{T_j^2}{n_j} - K ; T_j = n_j \bar{x}_j ; K = \frac{T_{..}^2}{n}$$

SS_e = sum of square of error

$$= SS_T - SS_t$$

SS_T = Sum of square of total

$$= \sum \sum x_{ij}^2 - K$$

(Kleinbaum, Kupper, & Muller, 1988).

If the null hypothesis is accepted, then there is no difference among the course achievement mean scores of the placement groups. However, if the null hypothesis is rejected, then the mean scores of at least one pair of the placement groups are different.

Chapter 3

Data Analysis

This chapter reports the research results in three parts in accordance with the three research questions: (1) The characteristics of the 1997 English Placement Test in terms of item difficulty and item discrimination, (2) validity and reliability of the 1997 English Placement Test, and (3) placement accuracy.

I. Characteristics of the 1997 English Placement Test: Item Analysis

As mentioned earlier, the subjects of this study were 1,224 first year students who took the 1997 English Placement Test because they had to be placed into 5 different courses of Suranaree University of Technology's English program. The test was a 100-item 4-option multiple-choice. This 2-hour test consisted of 4 parts: Listening, 25 questions, Reading and Vocabulary, 40 questions, Speaking, 10 questions, and Grammar and Written Expressions, 25 questions. It was administered at the beginning of the term before classes began. The item difficulty index and item discrimination index of each item or question were calculated by using the Classical Test Item Analysis and Grading program (CTIA/Grading) with 27% upper and lower groups. Tables 1 and 2 show the criteria for item selection and interpretation of difficulty index and discrimination index.

Table 1 Criteria for item selection and interpretation of difficulty index

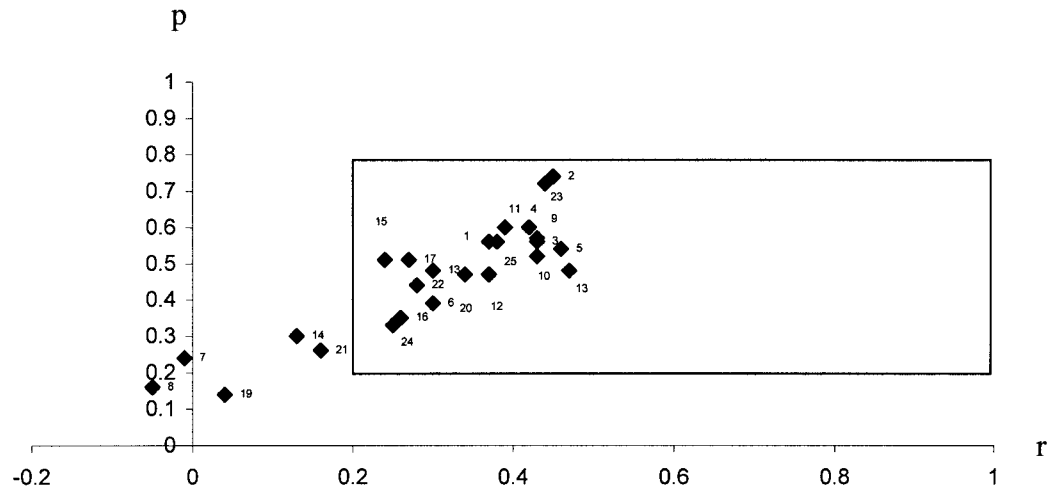
Index of Difficulty (p)	Item Evaluation
0.80 - 1.00	Too easy
0.60 - 0.79	Rather easy
0.40 - 0.59	Moderately difficult
0.20 - 0.39	Rather difficult
0.00 - 0.19	Too difficult

Table 2 Criteria for item selection and interpretation of discrimination index

Index of Discrimination (r)	Item Evaluation
0.60 – 1.00	Very good items
0.40 – 0.59	Good items
0.20 – 0.39	Reasonably good but possibly subject to improvement
0.10 – 0.19	Marginal items, usually need and subject to improvement
0.00 – 0.09	Poor items, to be rejected or rewritten

The items with p values that fell approximately within a range of 0.20 – 0.80 (or $0.20 < p < 0.80$) and with r values over 0.20 (or $r > 0.20$) were interpreted as appropriate or acceptable; that is, they were not too difficult or too easy. They would also discriminate or distinguish very well between the high and low students. Those fell in the box were good items while others outside were subject to improvement or rewriting. The item statistics is provided in the Appendix. The item evaluation of each of the 4 sections of the English Placement Test is shown in Tables 3, 4, 5, and 6.

Section 1 Listening 25 items/questions (Questions 1-25)

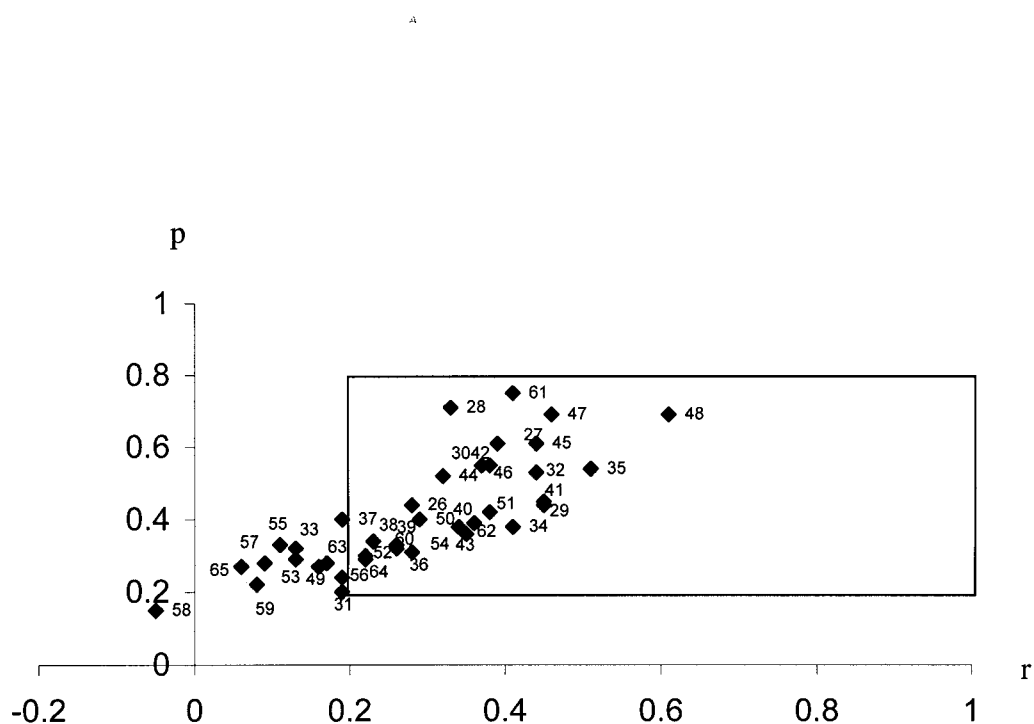


Graph 1 Distribution of Section 1 items' difficulty indices (p) and discrimination indices (r)

Graph 1 shows the following results

1. Of 25 items, 15 items or 60% were considered good items
2. Distracters of Items 6, 15, 20, 22, and 24, 5 items or 20% needed improvement.
3. 5 items, or 20%, were subject to be rewritten in both the stems and the distracters.
 - 3.1 Items 7, 14, and 21 needed higher p values. Item 7, in particular, must be rejected because of its negative r value and ineffective distracters.
 - 3.2 Item 19 was too difficult and therefore must be improved, and Item 8 must be rejected because of its negative r value and ineffective distracters.

Section 2 Reading and Vocabulary 40 items/questions (Questions 14-65)

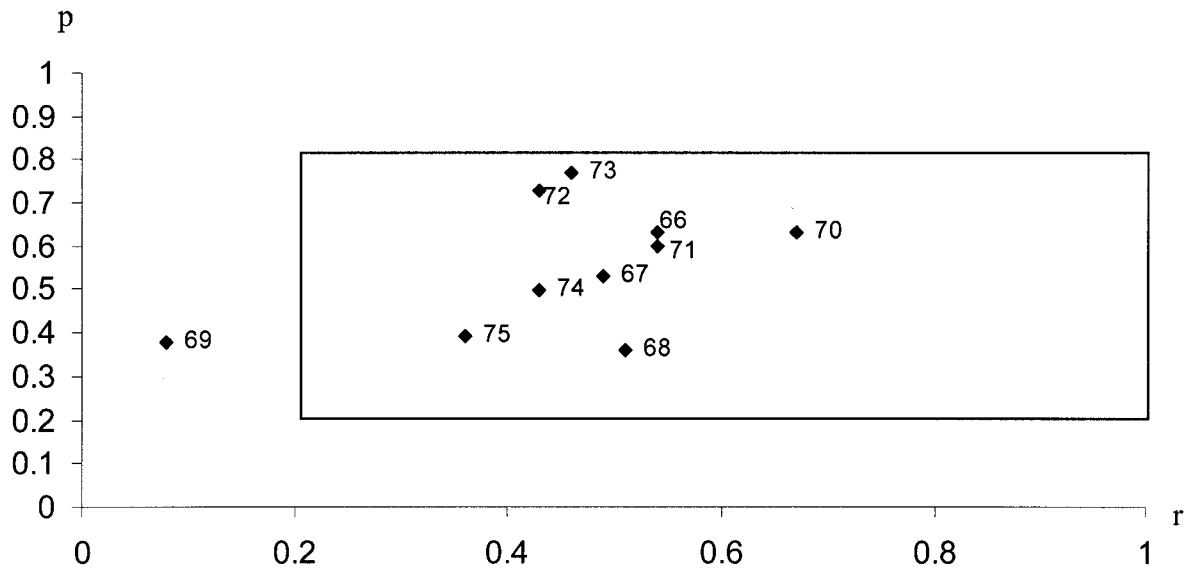


Graph 2 Distribution of Section 1 items' difficulty indices (p) and discrimination indices (r)

Graph 2 shows the following results:

1. 21 items or 52% were good items.
2. 7 items or 18% needed improved distracters: Items 36, 38, 39, 52, 60, 62, and 64.
3. 12 items or 30% needed improvement in both the stems and the distracters.
 - 3.1 10 items needed improvement or higher r values. These included Items 33, 37, 49, 53, 55, 56, 57, 59, 63, and 65. Particularly, Items 55, 57, 59, and 65 must be rejected because their r values were very low and their distracters were ineffective.
 - 3.2 Items 31 and 58 needed improvement of their stems, p values, and r values. Item 58, in particular, must be rejected because of its negative r value and ineffective distracters.

Section 3 Speaking 10 items/questions (Questions 66-75)



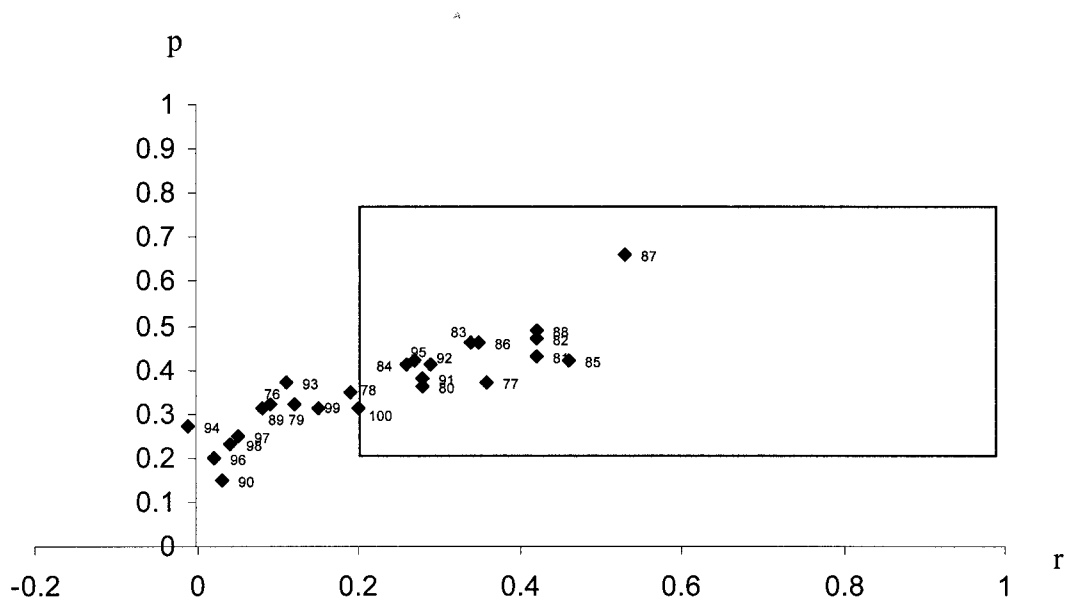
Graph 3 Distribution of Section 3 items' difficulty indices (p) and discrimination indices (r)

Graph 3 shows the following results:

1. 9 items or 90% were good items.
2. Item 69 must be rewritten because of its very low r value and ineffective distracters.



Section 4 Grammar and Writing 25 items/questions (Questions 76-100)



Graph 4 Distribution of Section 4 items' difficulty indices (p) and discrimination indices (r)

Graph 4 reports the following findings:

1. Only 6 items or 24% were good items.
2. Distracters of Items 77, 80, 84, 86, 91, 92, and 95 (7 items or 48%) needed to be revised.
3. 12 items or 48% were poor items and therefore subject to improvement.
 - 3.1 Items 76, 78, 79, 89, 93, 94, 97, 98, 99, and 100 (10 items) had very low r values and ineffective distracters and therefore must be rejected and rewritten
 - 3.2 Items 90 and 96 were very poor items with very low p and r values and

In brief, the item analysis of the 1997 English Placement Test revealed the following characteristics of the test:

1. 51 items or 51% were good items.
2. 19 items or 19% needed improved distracters.
3. 30 items or 30% were subject to revision, 24 of which needed higher discrimination index values. The other 6 items must be rejected and rewritten.

The average difficulty index (p) for the whole test was 0.43. This means that the test had an appropriate level of difficulty. The average discrimination index (r) for the whole test was 0.29, which was acceptable, though rather low.

II. Validity and Reliability of the 1997 English Placement Test

Validity

Validity is defined as “the degree to which a test is measuring what it claims to measure” (Brown, 1989, p. 80). The 1997 English Placement was considered content valid because its content constituted a representative sample of the language skills, grammatical structures, vocabulary, etc. it was meant to be concerned. All 100 items were written in accordance with a specification based on both the high school English objectives and the SUT’s English program course objectives (English I, II, III, IV, and V). Three instructors who had over 15 years of ESL teaching experience at college level and who were also not directly concerned with the production of the placement test were requested to check the test items against the test specification. This was to make sure that the test was an accurate measure of what it was supposed to measure.

In addition to being content valid, the 1997 English Placement was considered to have construct validity because it measured just the ability it was supposed to measure. As mentioned earlier in Chapter 1 on a description of the placement test, Section 1, Listening, was intended to measure students’ ability to understand conversations, directions, and mini, academic lectures. Section 2 measured students’ micro-skills of skimming and scanning for topics, main ideas, and supporting details, predicting, identifying referents of pronouns, inferring, concluding, recognizing indicators in discourse for different parts of text, and using context to guess meaning of unfamiliar words. Texts varied in formats and lengths. This section also assessed students’ knowledge of active, general lexicon items in science and technology frequently found in English I, II, III, and IV. All the vocabulary words tested were in contexts and in the formats of sentence context, gap filling, and modified cloze. Section 3, Speaking, measured students’ ability to use appropriate language in carrying on conversations in various situations. The last section, Section 4, Grammar and Written Expressions, asked students to identify parts of speech and sentence structures, organize given sentences into paragraphs of different discourse patterns, and choose paraphrases and summaries to given texts.

Reliability

In the investigation of the reliability of the 1997 English Placement Test, it was necessary to obtain the descriptive statistics of the students' performance, that is, the mean score, maximum score, minimum score, standard deviation, and so on. Below are the obtained data:

Mean score	47.12
Maximum score	96
Minimum score	6
Standard Deviation	13.55
Sk	0.41
Ku	0.31
Standard Error of Measurement	0.39

They show that the students' English ability was low on average. A rather high standard deviation score of 13.55 indicate that their language abilities varied greatly. Figure 1 provides a very clear picture of the students' overall performance on the 1997 English Placement Test.

Since the 1997 English Placement Test was a single test, scored dichotomously (1 or 0), one point for each correct answer and no points for an incorrect answer, the K-R20 formula for internal consistency analysis was used to estimate its reliability. The K-R20 reliability coefficient of 0.854 indicated that the test was highly reliable and that the testees' scores would be accurate, reproducible, and generalizable to other testing occasions (Ebel and Frisbie, 1991).

When the Standard Error of Measurement of the placement was calculated to see how close an individual student's actual score was to what he or she might have scored on another occasion, that is, his "true score, it was found that the test had an SEM of 4.582. This means that each student's true score was expected to lie in the range of +/- 4.582 of the score actually obtained on that occasion.

III. Placement Accuracy

In order to report the results of the investigation on whether or not the first year students were placed correctly into appropriate levels based on their placement scores, the researcher chose to present the findings in the following order:

1. A description of the placement decisions made as well as the subjects' enrollments for their English courses.
2. Findings on relationship between the subjects' placement test scores and their English I, II, III, and IV achievement scores
3. Comparisons of the subjects' English II, III, and IV achievement scores among different placement groups

Placement Decisions

Unlike typical Thai universities, Suranaree University of Technology operates in the trimester system. One trimester or term lasts 13 weeks, with the first term beginning in June. A total of 1,224 first year students of the 1997 academic year took the 2-hour, 100-item 4-option multiple-choice English Placement Test. Their mean, median, and mode scores were 47.12, 46.00, and 44.00, respectively (S.D. = 13.55). The test scores were normally distributed. Figure 1 shows the aforementioned descriptive statistics.

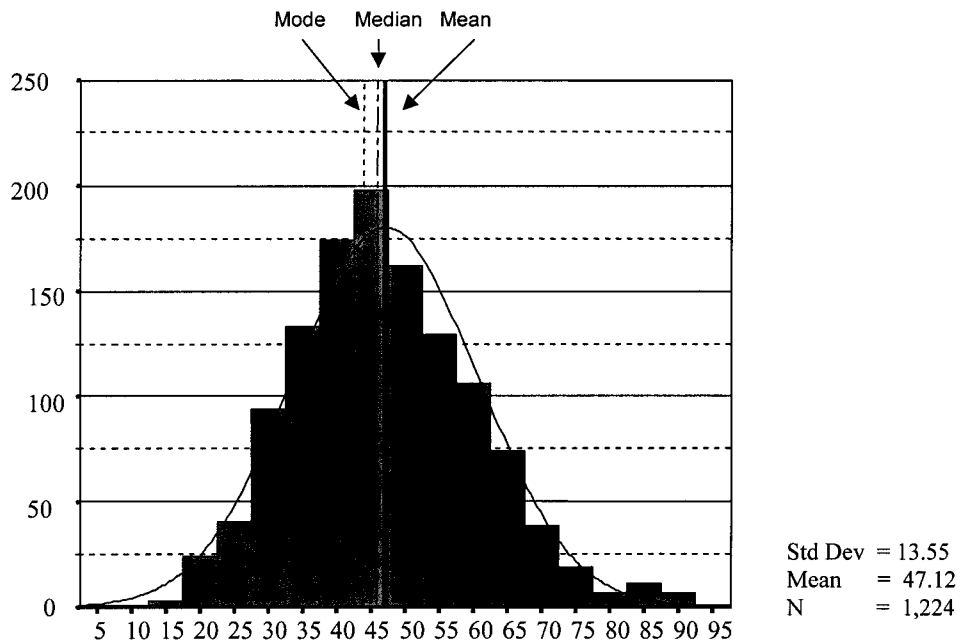


Figure 1 Distribution of 1997 English Placement Test scores

As shown in Table 3, most of the students, 595, or 48.61%, were placed into English II, referred to in this study as Placement 2 or P2; 365, or 29.82%, English 1; 199, or 16.26%, English III; 60, or 4.90%, English IV; and 5, or 0.41%, English V.

Table 3 Placement groups by English Placement Test at Term 1/1997

Placement Group	N	Percent	Median	Mode	Mean	SD
P1	365	29.82	33	38	32.10	5.78
P2	595	48.61	47	44	47.78	4.98
P3	199	16.26	62	59.62	62.63	3.33
P4	60	4.90	75	71.72	76.87	5.73
P5	5	0.41	91	90	91.80	2.49
Total	1,224	100				

Because all English I, II, III, and IV aimed at developing mainly students' reading, listening, and speaking skills, with little emphasis on writing, their midterm and final exams followed the same format as the 1997 English Placement Test. In contrast, English V is totally different in nature because it was an academic essay writing course. Therefore, this study used only the subjects' placement scores and their English I, II, III, and IV achievement scores in investigating placement accuracy.

A follow up on the subjects' English I, II, III, and IV achievement scores for 8 terms, from Term 1/1997 to Term 2/1999, revealed that among 365 students placed into English I (P1), only 329 took English II, 295 took English III, and 204 took English IV. From a total of 595 placed in English II (P2), 591 took English II, 529 took English III, and 470 took English IV. Of all 199 placed into English III (P3), 197 took English III and 191 took English IV. Of those 60 students placed into English IV, only 58 took the course. Table 4 provides more details on the students' registration for the four English courses during the study.

Table 4 Placement groups 1, 2, 3, and 4's registration for English I, II, III, & IV

Placement	Course	1997			1998			1999		Total
		Term 1	Term 2	Term 3	Term 1	Term 2	Term 3	Term 1	Term 2	
P1	English 1	364	-	-	-	1	-	-	-	365
	English 2	-	159	159	3	5	3	-	-	329
	English 3	-	-	112	16	108	29	24	16	295
	English 4	-	-	-	50	25	33	63	53	204
P2	English 2	590	1	-	-	-	-	-	-	591
	English 3	-	225	260	12	20	9	-	3	529
	English 4	-	-	135	131	83	61	35	25	470
P3	English 3	195	-	-	1	1	-	-	-	197
	English 4	-	92	83	5	9	1	-	1	191
P4	English 4	58	-	-	-	-	-	-	-	58

At this point, it is appropriate to say that although 3-4 parallel versions of English I, II, III, and IV achievement tests (the midterm and final exams) were used in different terms during the study (8 trimesters), they were not considered as different tests in terms of validity and reliability.

English Placement Test Scores and English I, II, III, and IV Scores

Given a congruence in content and given that the English course grades were valid measures of educational achievement, there should be a statistical relationship between placement scores and course achievement (Sawyer, 1989). To investigate whether the students were placed accurately into the levels that fit their language ability, correlation coefficients of the subjects' placement scores and their English I, II, III, and IV achievement scores were calculated.

Table 5 Correlation between placement test and English I, II, III, & IV scores

Placement	English 1	English 2	English 3	English 4
P1	-0.49 (0.353)	-0.51 (0.357)	-0.38 (0.517)	-0.13 (0.063)
P2	-	0.27 (<0.001)	0.30 (<0.001)	0.31 (<0.001)
P3	-	-	0.35 (<0.001)	0.22 (0.003)
P4	-	-	-	0.43 (0.001)

Table 5 shows the following findings:

1. The negative correlation coefficients of - 0. 49, - 0.51, - 0.38, and – 0.31 show that there was no relationship between the Placement 1 students' English Placement Scores and their English I, II, III, and IV scores, respectively.
2. The positive correlation coefficients of 0.27 (P-value<0.001) 0.30 (P-value <0.001), and 0.31 (P-value<0.001) show that the Placement 2 students' English Placement Test scores correlated significantly with their English II, III, and IV scores. It could be interpreted that the students who performed well in the placement test also did well in their English courses.
3. The positive correlation coefficients of 0.35 (P-value<0.001) and 0.22 (P-value = 0.003) indicated that the Placement 3 students' English Placement Test scores correlated significantly with their English III and IV scores, respectively. It could be interpreted that the students who performed well in the placement test also did well in their English courses.
4. The positive correlation coefficients of 0.43 (P-value = 0.001) means that the Placement 4 students' English Placement Test scores correlated significantly with their English IV scores. It could be concluded that the students who performed well in the placement test also did well accordingly in English IV.

In brief, there was a significant correlation between the English Placement Test scores and the English course scores of the students' placed into English II, III, and IV. It was, therefore, reasonable to conclude that these students were correctly placed into the levels that fit their English abilities.

To confirm the above findings on placement accuracy, the researcher compared the subjects' English II, III, and IV achievement scores among the 4 placement groups. It was hypothesized that if the placement decisions were accurate, the students placed into higher levels should get higher achievement scores in the same courses. If, for example, the P1 group students scored significantly higher in English II than the P2 group, then there was something wrong with the placement.

Table 6 shows the 4 placement groups' English course achievement scores. For instance, the P1 placement group's English II mean score was 61.11 while the P2 placement group's mean score of the same course was 64.79. Tables 7, 8, and 9 show comparisons of the English course mean scores among the 4 placement groups.

Table 6 Placement groups 1, 2, 3, & 4's English I, II, III, & IV achievement scores

Placement	Courses Taken											
	English I			English II			English III			English IV		
	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD
P1	362	67.58	9.49	329	61.11	7.81	287	63.20	8.54	202	60.31	7.38
P2	-	-	-	586	64.79	9.83	546	65.18	8.00	492	62.23	6.98
P3	-	-	-	-	-	-	196	68.48	6.31	190	68.81	6.56
P4	-	-	-	-	-	-	-	-	-	58	76.80	9.58

As illustrated in Table 7, when a t-test was employed to test the difference in English II scores of the P1 and P2 groups, it revealed that the P2 placement group scored higher in English II than the P1 placement group at the .05 level of significance.

Table 7 Comparison of English II mean scores between Placement groups 1 & 2

Placement	Mean	SD	t-test	sig
P1	61.11	7.81	-5.841	.000*
P2	64.79	9.83		

*<.05

Table 8 shows the English III mean scores earned by the P1, P2, and P3 placement groups, 63.20, 65.18, and 68, respectively. An F-test of the scores indicated that the P3 placement group scored significantly higher than the P2 and P1 placement groups at the 0.05 level.

Table 8 Comparison of English III mean scores among Placement groups 1, 2, & 3

Placement	Mean	SD	F	Sig
P1	63.20	8.54	26.236	.000*
P2	65.18	8.00		
P3	68.47	6.30		

*<.05

When the English IV mean scores earned by each of the 4 placement groups were compared, it was found that the P4 placement group scored the highest (76.80), followed by the P3 placement group (68.81), the P2 placement group (62.23), and the P1 placement group (60.31) respectively. The F-test employed, it was found that the 4 placement groups' achievement scores were significantly different at the 0.05 level as shown in Table 9.

Table 9 Comparison of English IV mean scores among Placement groups 1, 2, 3, & 4

Placement	Mean	SD	F	Sig
P1	60.31	7.38	11.006	.000*
P2	62.23	6.97		
P3	68.81	6.56		
P4	76.80	9.58		

*<.05

In short, it was apparent that the hypothesis was accepted; the first year students placed into higher levels performed better in a course than those taking the same course but originally placed into a lower level. It was, therefore, reasonable to conclude that the subjects were accurately placed by the 1997 English Placement Test.

Chapter 4

Conclusions and Recommendations

Purposes of the Study

This study was carried out to achieve 3 main purposes:

1. To make an item analysis of the 1997 English Placement Test so as to describe the test items' characteristics.
2. To investigate the quality of the placement test in terms of its validity and reliability.
3. To find out whether the 1997 in-take students were placed accurately into their English ability levels.

Subjects

The subjects of this study were 1,224 first year students who took the 1997 English Placement Test prior to the beginning of their studies at Suranaree University of Technology. Based on the placement test results, they were placed into 5 levels namely English I, II, III, IV, and V. Those assigned into English I must take English I, II, III, IV, and V to complete the university's English program. Those placed into English II will then take English III, IV, V, and two English electives to make a total of 5 courses.

Methods

The following steps were taken to achieve the three purposes of this study:

1. Constructed a 2-hour 100-item 4-option multiple-choice English placement test to measure the students' language proficiency acquired after high school as well as their ability to follow the university's 5 compulsory English courses. The test consisted of 4 sections: (1) Listening, 25 questions, (2) Reading and Vocabulary, 40 questions, (3) Speaking, 10 questions, and (4) Grammar and Written Expressions, 25 questions.
2. Administered the placement test to 1,224 first year students 3 days prior to the beginning of classes.
3. Computer scored the test papers and placed the students into 5 different levels using the following cutting scores:

English V	90 up
English IV	71-89
English III	58-70
English II	40-57
English I	0-39

4. Conducted an item analysis of the 1997 English Placement Test using the Classical Item Analysis and Grading program (CTIA/Grading) with 27% upper and lower groups. Calculated each item's difficulty index and discrimination index and described it individually and judged whether it was a good item or how it should be revised or rewritten.
5. Described the placement test's content and construct validity and calculated its reliability using the KR-20 correlation coefficient formula.
6. Followed-up on the subjects' achievement scores in English I, II, III, and IV for 8 trimesters, from Term 1/1997 to Term 2/1999.
7. Investigated the relationship between the subjects' English Placement Test scores and their English I, II, III, and IV achievement scores to determine whether they were accurately placed into the right levels.
8. Compared the subjects' English II, III, and IV achievement scores among the 4 placement groups to confirm placement accuracy.

Results and Discussions

I. Item Analysis

The item analysis of the 1997 English Placement Test revealed the following characteristics of the test:

1. 51 items or 51% were good items.
2. 19 items or 19% needed improved distracters.
3. 30 items or 30% were subject to revision, 24 of which needed higher discrimination index values. The other 6 items must be rejected and rewritten.
4. The average difficulty index (p value) for the whole test was 0.43. This means that the test had an appropriate level of difficulty. The average discrimination index (r value) for the whole test was 0.29, which was acceptable, though rather low.

The item analysis results were used in the process of constructing the 1998 English Placement Test. All of the good items were banked, while those subject to revision were revised or rewritten as needed.

II. The Quality of the 1997 English Placement Test: Validity and Reliability

1. Validity

The placement test was found to be both content valid and construct valid. It was content valid because its 100 items were written in response to a specification based on both the high school English objectives as well as the university's English program course objectives. The test was read by three experienced English instructors with at least 15 years of ESL teaching at college level. Therefore, it was sure to measure what it was supposed to measure.

The placement test was construct valid in that its four sections measured just the ability it was supposed to measure, namely the skills in listening, reading and vocabulary, grammar and written, and speaking.

2. Reliability

The obtained KR-20 reliability coefficient of 0.854 of the test indicated that the test was highly reliable and that the testee's scores would be accurate, reproducible, and generalizable to other occasions.

III. Placement Accuracy

Calculations of correlation coefficients of the subjects' placement scores and their English I, II, III, and IV achievement scores yielded the following findings:

1. There was no relationship between the English I placement group's placement scores and their English I, II, III, and IV achievement scores. This could be due to the fact that some students did not take the test seriously since they were advised by their seniors to score low so that they would be placed into the lowest level and get good grades in English I. As a result, these students were false English I students who not only wasted their time and money, missed opportunities to take more interesting or more advanced courses, or became bored, but also made learning and teaching difficult for other students and the teacher.
2. The English II placement group's placement scores significantly correlated with their English II, III, and IV achievement scores.
3. The English III placement group's placement scores significantly correlated with their English III and IV achievement scores.
4. The English IV placement group's placement scores significantly correlated with their English IV achievement scores.

From the above data, it was reasonable to conclude that the placement decisions based on the 1997 English Placement Test results were accurate. That is, they were assigned at the levels that fit their English ability.

Even though the English I placement group's performance did not conform to the rest of the findings, it was explainable. First, some new first year students were advised to score the lowest possible intentionally so as to be placed into English I, the

lowest level of the English program so that they would get a good grade in the course. In other words, these students were actually false beginners. Second, some students may not be familiar with the test format; therefore, they did poorly on the placement test. Once they were used to such a format, which was also used in the English I achievement tests (midterm and final), then they performed better. Students' motivation could also have made the difference. Some students could have been motivated by the fact that they were placed at the lowest level and therefore strove harder to avoid peer pressure.

A further investigation was carried to confirm whether the placements were correct. It was hypothesized that if the students assigned to the higher levels scored higher than those put into the lower levels in a course, then the placements were accurate. In other words, the English II placement group should score higher than the English I placement group in English 2. To test this hypothesis, comparisons of the subjects' English II, III, and IV achievement scores among the 4 placement groups were made. The following findings were revealed:

1. The English II placement group scored significantly higher in English II than those placed in the English I placement group at 0.05 level.
2. The English III placement group scored significantly higher in English III than those placed into the English I and II groups at the 0.05 level.
3. The English IV placement group scored significantly higher in English IV than those placed into the English I, II, and III placement groups at 0.05 level. In fact, they scored the highest, followed by the English III, II, and I placement groups, respectively.

In brief, the hypothesis was accepted; therefore, it was confirmed that the placement decisions were accurate.

Conclusions

The outcomes of this study were encouraging from the School of English's point of view because it had managed to revise the 1997 English Placement Test, based on the obtained item analysis statistics and item evaluation, and used it as the 1998 English Placement Test. According to Tipsuwankoon (1999), 61% of the items of the new version were considered "very good," 97% with appropriate difficulty level (average p value of 0.54), 83% with satisfactory discriminating power (average r-value of 0.337), and the KR-20 internal consistency reliability value of 0.895. The 1997 certainly served its original purpose as the first study of its kind at Suranaree University of Technology.

The School of English also gained more confidence in making placement decisions once this study revealed that the 1997 English Placement Test scores correlated significantly with the English II, III, and IV course achievement scores. The fact that the students placed into the higher level courses scored higher in the exit course (English IV) than those placed into the lower level courses confirmed that the 1997 placements were accurate.

Recommendations

1. For the 1997 English Placement Test to be ideally effective, it should have been revised after the first administration based on the item analysis statistics, re-tested with the same population, revised again before the second administration for actual placement decisions.
2. Good test items should be banked systematically so that they could be used in the construction of parallel placement tests for future use.
3. Each parallel placement test should be pre-tested and post-tested so that it would be more efficient than the original version as well as more valid for purposes of student placement.
4. New first year students should be formally informed of the purposes of the English Placement Test, the University's English program with descriptive details of the core and elective courses, and how the placement test result would affect their language proficiency. This would encourage them to take the placement test more seriously.
5. Remedial lessons should be provided out of class for those who scored very low in the placement test.
6. Based on the English I course achievement scores, the midterm test results for example, changes in placement should be made, particularly for those false beginners who intentionally did poorly in the placement test. This would benefit not only the students themselves so that they could study at the level suitable to them, but also their fellow English I classmates and the teacher since more appropriate teaching would be likely to take place.
7. The study of this type should be carried out continuously for more effective placements.

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Appendix

Item Analysis of 1997 English Placement Test

Table 10 Difficulty index value (p), Discrimination index value (r), and Item Evaluation

Item		Upper Group	Lower Group	p	r	Item Evaluation
1	✓ A.	246	123	0.56	0.37	Apparent difficult Discriminating Good distracters
	B.	34	96	0.20	-0.19	
	C.	23	54	0.11	-0.09	
	D.	27	50	0.12	-0.07	
	E.					
2	✓ A.	309	161	0.74	0.45	Rather easy Well discriminating Good distracters
	B.	14	61	0.10	-0.14	
	C.	2	47	0.07	-0.14	
	D.	5	52	0.09	-0.14	
	E.					
3	A.	23	48	0.10	-0.08	Apparently difficult Well discriminating Good distracters
	B.	16	62	0.13	-0.14	
	C.	36	98	0.20	-0.19	
	✓ D.	254	11	0.56	0.43	
	E.					
4	A	32	43	0.10	-0.03	Rather easy Well discriminating Good distracters
	✓ B.	253	116	2.60	0.42	
	C.	21	74	0.13	-0.16	
	D.	18	85	0.15	-0.20	
	E.					

p = Difficulty index

r = Discriminations index

✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
5.	A.	15	42	0.08	-0.08	Apparently difficult Well discriminating Good distracters
	B.	44	100	0.24	-0.17	
	C.	12	72	0.13	-0.18	
	✓D.	255	103	0.54	0.46	
	E.					
6.	A.	33	79	0.17	-0.14	Rather difficult Discriminating Good distracters, except C, which needs improvement
	B.	57	88	0.23	-0.09	
	C.	44	57	0.18	-0.04	
	✓D.	192	94	0.39	0.30	
	E.					
7.	A.	14	51	0.10	-0.11	Rather difficult Not discriminating at all <u>Needs improvement</u>
	✓B.	70	74	0.24	-0.01	
	C.	22	59	0.12	-0.11	
	D.	222	138	0.54	0.26	
	E.					
8.	A.	205	90	0.43	0.35	Very difficult Not discriminating at all Needs improvement
	✓B.	47	62	0.16	-0.05	
	C.	32	77	0.19	-0.14	
	D.	44	91	0.22	-0.14	
	E.					

p = Difficulty index

r = Discriminations index

✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
9.	A.	15	56	0.11	-0.12	Apparent difficult Discriminating Good distracters
	B.	23	72	0.16	-0.15	
	✓C.	266	124	0.57	0.43	
	D.	24	72	0.15	-0.15	
	E.					
10.	✓A.	256	115	0.52	0.43	Apparent difficult Discriminating Good distracters
	B.	23	72	0.16	-0.15	
	C.	36	77	0.20	-0.12	
	D.	11	57	0.11	-0.14	
	E.					
11.	A.	33	71	0.19	-0.12	Rather easy Discriminating Good distracters
	✓B.	266	137	0.60	0.39	
	C.	9	68	0.10	-0.18	
	D.	21	46	0.11	-0.08	
	E.					
12.	✓A	222	101	0.47	0.37	Apparently difficult Discriminating Good distracters
	B.	33	79	0.18	-0.14	
	C.	49	94	0.23	-0.14	
	D.	20	49	0.10	-0.09	
	E.					

p = Difficulty index

r = Discriminations index

✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
13.	✓ A.	246	90	0.48	0.47	Apparently difficult Well discriminating Good distracters
	B.	25	70	0.16	-0.14	
	C.	29	99	0.19	-0.21	
	D.	28	64	0.16	-0.11	
	E.					
14.	A.	54	82	0.22	-0.08	Rather difficult Not discriminating <u>Needs improvement</u>
	B.	56	75	0.21	-0.06	
	✓ C.	128	85	0.30	0.13	
	D.	90	81	0.26	0.03	
	E.					
15.	A.	52	42	0.13	0.03	Apparently difficult Discriminating Good distracters, except A, which needs improvement
	B.	52	110	0.26	-0.18	
	✓ C.	203	121	0.51	0.24	
	D.	21	52	0.11	-0.09	
	E.					
16.	A	32	47	0.14	-0.05	Rather difficult Discriminating Good distracters
	B.	76	101	0.28	-0.08	
	C.	52	99	0.23	-0.14	
	✓ D.	167	80	0.35	0.26	
	E.					

p = Difficulty index
r = Discriminations index
✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
17.	A.	22	59	0.11	-0.11	Apparently difficult Discriminating Good distracters
	✓B.	214	126	0.51	0.27	
	C.	15	45	0.09	-0.09	
	D.	79	97	0.29	-0.06	
	E.					
18.	A.	37	57	0.15	-0.06	Apparently difficult Discriminating Good distracters
	✓B.	211	112	0.48	0.30	
	C.	67	127	0.31	-0.18	
	D.	15	30	0.06	-0.05	
	E.					
19.	A.	75	77	0.19	-0.01	Very difficult Not discriminating at all <u>Needs improvement</u>
	B.	60	68	0.22	-0.02	
	✓C.	65	50	0.14	0.04	
	D.	129	130	0.44	-0.01	
	E.					
20.	✓A	213	102	0.47	0.34	Apparently difficult Discriminating Good distracters, except C, which needs improvement
	B.	69	123	0.28	-0.16	
	C.	27	39	0.12	-0.04	
	D.	20	61	0.13	-0.12	
	E.					

p = Difficulty index

r = Discriminations index

✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
21.	A.	53	90	0.20	-0.11	Rather difficult Poorly discriminating <u>Needs improvement</u>
	B.	37	79	0.18	-0.13	
	✓ C.	121	69	0.26	0.16	
	D.	118	86	0.36	0.10	
	E.					
22.	✓ A.	183	92	0.44	0.28	Apparently difficult Discriminating Good distracters, except C, which needs Improvement
	B.	25	70	0.14	-0.14	
	C.	101	110	0.31	-0.03	
	D.	19	51	0.10	-0.10	
	E.					
23.	A.	19	75	0.14	-0.17	Rather easy Well discriminating Good distracters
	✓ B.	302	157	0.72	0.44	
	C.	7	60	0.09	-0.16	
	D.	2	37	0.05	-0.11	
	E.					
24.	A	75	69	0.22	0.02	Rather easy Well discriminating Good distracters
	B.	25	67	0.13	-0.13	
	C.	74	112	0.31	-0.12	
	✓ D.	155	74	0.33	0.25	
	E.					

p = Difficulty index

r = Discriminations index

✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
25.	A.	10	46	0.08	-0.11	Apparently difficult Discriminating Good distracters
	B.	38	86	0.19	-0.15	
	C.	38	72	0.15	-0.10	
	✓D.	243	119	0.56	0.38	
	E.					
26.	✓A.	190	97	0.44	0.28	Apparently difficult Discriminating Good distracters
	B.	73	94	0.26	-0.06	
	C.	23	76	0.14	-0.16	
	D.	42	58	0.15	-0.05	
	E.					
27.	A.	35	66	0.15	-0.09	Rather easy Discriminating Good distracters
	B.	7	44	0.06	-0.11	
	✓C.	259	129	0.61	0.39	
	D.	28	85	0.18	0.17	
	E.					
28.	A	28	53	0.11	-0.08	Rather easy Discriminating Good distracters
	B.	13	56	0.10	-0.13	
	C.	13	54	0.09	-0.12	
	✓D.	275	166	0.71	0.33	
	E.					

p = Difficulty index

r = Discriminations index

✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
29.	✓ A.	224	75	0.44	0.45	Apparently difficult Well discriminating Good distracters
	B.	59	83	0.23	-0.07	
	C.	27	106	0.20	-0.24	
	D.	20	64	0.12	-0.13	
	E.					
30.	A.	25	69	0.14	-0.13	Apparently difficult Well discriminating Good distracters
	B.	32	58	0.13	-0.08	
	✓ C.	247	125	0.55	0.37	
	D.	26	76	0.18	-0.15	
	E.					
31.	A.	49	87	0.23	-0.12	Rather difficult Poorly discriminating <u>Needs improvement</u>
	✓ B.	115	53	0.20	0.19	
	C.	80	126	0.35	-0.14	
	D.	84	59	0.22	0.08	
	E.					
32.	A	14	69	0.11	-0.17	Apparently difficult Well discriminating Good distracters
	B.	28	82	0.15	-0.16	
	C.	41	74	0.21	-0.10	
	✓ D.	247	103	0.53	0.44	
	E.					

p = Difficulty index

r = Discriminations index

✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
33.	A.	50	55	0.15	-0.02	Rather difficult Poorly discriminating <u>Needs improvement</u>
	B.	95	119	0.35	-0.07	
	C.	56	67	0.18	-0.03	
	✓D.	128	84	0.32	0.13	
	E.					
34.	✓A.	199	64	0.38	0.41	Rather difficult Well discriminating Good distracters
	B.	44	81	0.20	-0.11	
	C.	38	95	0.21	-0.17	
	D.	46	83	0.21	-0.11	
	E.					
35.	A.	39	77	0.21	-0.16	Apparently difficult Well discriminating Good distracters
	B.	13	81	0.13	-0.21	
	C.	18	75	0.13	-0.17	
	✓D.	260	93	0.54	0.51	
	E.					
36.	A	44	95	0.23	-0.16	Rather difficult Discriminating Good distracters, except C, which needs improvement
	✓B.	156	65	0.31	0.28	
	C.	73	70	0.22	0.01	
	D.	56	94	0.23	-0.12	
	E.					

p = Difficulty index

r = Discriminations index

✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
37	A.	78	89	0.28	-0.03	Apparently difficult Poorly discriminating <u>Needs improvement</u>
	B.	34	72	0.15	-0.16	
	✓C.	161	100	0.40	0.19	
	D.	57	66	0.17	-0.03	
	E.					
38.	A.	83	79	0.26	0.01	Rather difficult Discriminating Good distracters, except A, which needs improvement
	✓B.	160	84	0.34	0.23	
	C.	27	86	0.17	-0.18	
	D.	60	77	0.22	-0.25	
	E.					
39.	✓A.	157	71	0.33	0.26	Rather difficult Discriminating Good distracters, except D, which needs improvement
	B.	12	61	0.10	-0.15	
	C.	11	67	0.10	-0.17	
	D.	150	126	0.47	0.07	
	E.					
40.	A	61	106	0.25	-0.14	Rather difficult Discriminating Good distracters
	✓B.	185	72	0.38	0.34	
	C.	40	75	0.19	-0.11	
	D.	42	72	0.18	-0.09	
	E.					

p = Difficulty index

r = Discriminations index

✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
41.	A.	13	49	0.08	-0.11	Apparently difficult Well discriminating Good distracters
	B.	25	106	0.19	-0.25	
	✓C.	227	79	0.45	0.45	
	D.	65	92	0.28	-0.08	
	E.					
42.	A.	23	50	0.11	-0.08	Apparently difficult Discriminating Good distracters
	✓B.	248	127	0.55	0.37	
	C.	26	87	0.20	-0.19	
	D.	33	61	0.14	-0.09	
	E.					
43.	✓A.	178	62	0.36	0.35	Rather difficult Discriminating Good distracters
	B.	64	84	0.23	-0.06	
	C.	58	87	0.23	-0.09	
	D.	30	92	0.19	-0.19	
	E.					
44.	A	28	53	0.12	-0.08	Apparently difficult Discriminating Good distracters
	B.	41	87	0.19	-0.14	
	✓C.	221	115	0.52	0.32	
	D.	39	70	0.17	-0.09	
	E.					

p = Difficulty index

r = Discriminations index

✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
45.	A.	20	56	0.10	-0.11	Rather easy Well discriminating Good distracters
	✓B.	268	122	0.61	0.44	
	C.	17	69	0.11	-0.16	
	D.	24	79	0.17	-0.17	
	E.					
46.	A.	46	71	0.18	-0.08	Apparently difficult Discriminating Good distracters
	✓B.	240	114	0.55	0.38	
	C.	21	68	0.13	-0.14	
	D.	22	72	0.14	-0.15	
	E.					
47.	A.	8	63	0.08	-0.17	Rather easy Well discriminating Good distracters
	✓B.	290	140	0.69	0.46	
	C.	15	64	0.11	-0.15	
	D.	16	58	0.11	-0.13	
	E.					
48.	A	9	58	0.09	-0.15	Rather easy Well discriminating Good distracters
	B.	14	78	0.12	-0.19	
	✓C.	290	121	0.69	0.51	
	D.	16	68	0.12	-0.16	
	E.					

p = Difficulty index
r = Discriminations index
✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
49.	A.	133	138	0.41	-0.02	Rather difficult Poorly discriminating <u>Needs improvement</u>
	B.	30	82	0.17	-0.16	
	C.	53	44	0.14	0.03	
	✓D.	114	61	0.27	0.16	
	E.					
50.	A.	45	71	0.19	-0.08	Apparently difficult Discriminating Good distracters
	B.	70	101	0.25	-0.09	
	✓C.	184	88	0.40	0.29	
	D.	28	61	0.15	-0.10	
	E.					
51.	A.	19	59	0.11	-0.12	Apparently difficult Discriminating Good distracters
	B.	58	81	0.22	-0.07	
	C.	43	105	0.24	-0.19	
	✓D.	206	81	0.42	0.38	
	E.					
52.	A	39	82	0.22	-0.13	Apparently difficult Discriminating Good distracters, except C, which needs improvement
	B.	59	78	0.19	-0.06	
	C.	87	91	0.28	-0.01	
	✓D.	143	72	0.30	0.22	
	E.					

p = Difficulty index
r = Discriminations index
✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
53.	A.	17	62	0.13	-0.14	Rather difficult Poorly discriminating <u>Needs improvement</u>
	B.	116	95	0.34	0.06	
	C.	66	83	0.23	-0.05	
	✓D.	128	85	0.29	0.13	
	E.					
54.	✓A.	159	74	0.32	0.26	Rather difficult Discriminating Good distracters
	B.	56	83	0.21	-0.08	
	C.	59	75	0.22	-0.05	
	D.	54	93	0.24	-0.12	
	E.					
55.	A.	40	73	0.17	-0.10	Rather difficult Poorly discriminating <u>Needs improvement</u>
	✓B.	132	97	0.33	0.11	
	C.	97	84	0.28	0.04	
	D.	58	66	0.20	-0.02	
	E.					
56.	A.	74	89	0.25	-0.05	Rather difficult Poorly discriminating <u>Needs improvement</u>
	B.	67	97	0.23	-0.09	
	C.	70	81	0.25	-0.03	
	✓D.	116	55	0.24	0.19	
	E.					

p = Difficulty index

r = Discriminations index

✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
57.	A.	54	80	0.20	-0.08	Rather difficult Poorly discriminating <u>Needs improvement</u>
	✓B.	104	74	0.28	0.09	
	C.	117	97	0.35	0.06	
	D.	52	68	0.15	-0.05	
	E.					
58.	✓A.	38	54	0.15	-0.05	Very difficult Not discriminating at all <u>Needs improvement</u>
	B.	88	96	0.27	-0.02	
	C.	93	79	0.24	0.04	
	D.	108	90	0.32	0.06	
	E.					
59.	A.	96	89	0.30	0.02	Rather difficult Poorly discriminating <u>Needs improvement</u>
	✓B.	97	70	0.22	0.08	
	C.	96	98	0.30	-0.01	
	D.	38	62	0.16	-0.07	
	E.					
60.	A	56	85	0.21	-0.09	Rather difficult Discriminating Good distracters, except C, which needs improvement
	✓B.	162	76	0.33	0.26	
	C.	74	82	0.28	-0.02	
	D.	35	78	0.17	-0.13	
	E.					

p = Difficulty index
r = Discriminations index
✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
61.	A.	8	72	0.10	-0.19	Rather easy Well discriminating Good distracters
	B.	14	54	0.09	-0.12	
	✓C.	300	166	0.75	0.41	
	D.	6	28	0.06	-0.07	
	E.					
62.	✓A.	190	73	0.39	0.36	Rather difficult Discriminating Good distracters, except D, which needs improvement
	B.	47	97	0.20	-0.15	
	C.	22	72	0.15	-0.15	
	D.	69	77	0.25	-0.02	
	E.					
63.	A.	36	55	0.14	-0.06	Rather difficult Poorly discriminating <u>Needs improvement</u>
	B.	121	104	0.37	0.05	
	C.	43	88	0.19	-0.14	
	✓D.	126	71	0.28	0.17	
	E.					
64.	✓A	147	76	0.29	0.22	Rather difficult Discriminating Good distracters, except B, which needs improvement
	B.	90	91	0.32	-0.01	
	C.	40	78	0.18	-0.12	
	D.	50	74	0.19	-0.07	
	E.					

p = Difficulty index

r = Discriminations index

✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
65.	A.	34	60	0.14	-0.08	Rather difficult Very poorly discriminating Needs improvement
	B.	113	82	0.30	0.09	
	✓C.	105	85	0.27	0.06	
	D.	74	91	0.27	-0.05	
	E.					
66.	✓A.	289	111	0.63	0.54	Rather easy Well discriminating Good distracters
	B.	11	71	0.11	-0.18	
	C.	20	91	0.17	-0.22	
	D.	9	47	0.08	-0.12	
	E.					
67.	A.	27	84	0.18	-0.17	Apparently difficult Well discriminating Good distracters
	B.	19	70	0.12	-0.16	
	C.	32	78	0.17	-0.14	
	✓D.	250	88	0.53	0.49	
	E.					
68.	✓A	230	61	0.36	0.51	Rather difficult Well discriminating Good distracters
	B.	26	86	0.18	-0.18	
	C.	43	92	0.25	-0.15	
	D.	30	78	0.20	-0.15	
	E.					

p = Difficulty index
r = Discriminations index
✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
69.	A.	126	78	0.31	0.15	Rather difficult Very poorly discriminating <u>Needs improvement</u>
	B.	4	68	0.09	-0.19	
	✓C.	137	112	0.38	0.08	
	D.	62	62	0.21	0.00	
	E.					
70.	A.	14	78	0.16	-0.19	Rather easy Well discriminating Good distracters
	B.	11	63	0.09	-0.16	
	✓C.	272	117	0.63	0.47	
	D.	31	64	0.11	-0.10	
	E.					
71.	A.	0	58	0.07	-0.18	Rather easy Well discriminating Good distracters
	B.	44	105	0.25	-0.19	
	C.	2	57	0.07	-0.17	
	✓D.	281	102	0.60	0.54	
	E.					
72.	A	11	53	0.08	-0.13	Rather easy Well discriminating Good distracters
	✓B.	303	161	0.73	0.43	
	C.	4	64	0.09	-0.18	
	D.	11	43	0.08	-0.10	
	E.					

p = Difficulty index
r = Discriminations index
✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
73.	A.	6	48	0.07	-0.13	Rather easy Well discriminating Good distracters
	✓B.	315	165	0.77	0.46	
	C.	3	69	0.10	-0.20	
	D.	5	37	0.05	-0.10	
	E.					
74.	A.	36	74	0.17	-0.12	Apparently difficult Well discriminating Good distracters
	✓B.	238	97	0.50	0.43	
	C.	29	82	0.17	-0.16	
	D.	26	67	0.15	-0.12	
	E.					
75.	A.	104	69	0.30	0.11	Rather difficult Discriminating Good distracters, except A, which needs improvement
	B.	20	88	0.14	-0.21	
	C.	14	90	0.16	-0.23	
	✓D.	191	73	0.39	0.36	
	E.					
76.	A	71	67	0.24	0.01	Rather difficult Very poorly discrimi- nating <u>Needs improvement</u>
	✓B.	119	88	0.32	0.09	
	C.	16	71	0.12	-0.17	
	D.	123	93	0.32	0.09	
	E.					

p = Difficulty index

r = Discriminations index

✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
77.	A.	96	103	0.32	-0.02	Rather difficult Discriminating Good distracters, except A, which needs Improvement
	B.	10	80	0.14	-0.21	
	C.	33	69	0.16	-0.11	
	✓D.	189	69	0.37	0.36	
	E.					
78.	A.	64	58	0.19	0.02	Rather difficult Rather poorly discriminating <u>Needs improvement</u>
	B.	70	103	0.20	-0.10	
	✓C.	148	84	0.35	0.19	
	D.	46	72	0.18	-0.08	
	E.					
79.	A.	61	76	0.20	-0.05	Rather difficult Rather poorly discriminating <u>Needs improvement</u>
	B.	123	100	0.34	0.07	
	✓C.	127	89	0.32	0.12	
	D.	18	51	0.12	-0.10	
	E.					
80.	✓A	168	77	0.36	0.28	Rather difficult Discriminating Good distracters, except C, which needs improvement
	B.	34	86	0.20	-0.16	
	C.	107	90	0.32	0.05	
	D.	19	66	0.11	-0.14	
	E.					

p = Difficulty index

r = Discriminations index

✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
81.	✓ A.	218	78	0.43	0.42	Apparently difficult Well discriminating Good distracters
	B.	56	88	0.23	-0.10	
	C.	31	88	0.19	-0.17	
	D.	23	62	0.14	-0.12	
	E.					
82.	A.	52	72	0.18	-0.06	Apparently difficult Discriminating Good distracters
	✓ B.	227	88	0.47	0.42	
	C.	23	78	0.17	-0.17	
	D.	25	80	0.17	-0.17	
	E.					
83.	A.	52	75	0.19	-0.07	Apparently difficult Discriminating Good distracters
	B.	56	80	0.22	-0.07	
	C.	16	67	0.12	-0.16	
	✓ D.	204	92	0.46	0.34	
	E.					
84.	A	60	78	0.24	-0.06	Apparently difficult Discriminating Good distracters, except D, which needs improvement
	B.	16	75	0.12	-0.18	
	✓ C.	180	94	0.41	0.26	
	D.	70	68	0.21	0.01	
	E.					

p = Difficulty index

r = Discriminations index

✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
85.	A.	6	76	0.12	-0.21	Apparently difficult Well discriminating Good distracters
	B.	75	92	0.31	-0.05	
	C.	24	73	0.13	-0.15	
	✓D.	223	73	0.42	0.46	
	E.					
86.	A.	71	83	0.27	-0.04	Apparently difficult Discriminating Good distracters, except A, which needs improvement
	B.	35	72	0.14	-0.11	
	✓C.	209	94	0.46	0.35	
	D.	13	60	0.10	-0.14	
	E.					
87.	✓A.	292	117	0.66	0.53	Rather easy Well discriminating Good distracters
	B.	7	59	0.09	-0.16	
	C.	11	60	0.11	-0.15	
	D.	18	72	0.13	-0.16	
	E.					
88.	A	33	54	0.14	-0.06	Apparently difficult Well discriminating Good distracters
	B.	21	99	0.19	-0.24	
	✓C.	235	95	0.49	0.42	
	D.	39	61	0.16	-0.07	
	E.					

p = Difficulty index
r = Discriminations index
✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
89.	A.	91	61	0.22	0.09	Rather difficult Very poorly discriminating <u>Needs improvement</u>
	✓B.	114	87	0.31	0.08	
	C.	62	93	0.25	-0.09	
	D.	58	67	0.19	-0.03	
	E.					
90.	✓A.	66	55	0.15	0.03	Very difficult Very poorly discriminating <u>Needs improvement</u>
	B.	129	90	0.38	0.12	
	C.	107	86	0.29	0.06	
	D.	23	74	0.15	-0.16	
	E.					
91.	A.	66	87	0.25	-0.06	Rather difficult Very poorly discriminating <u>Needs improvement</u>
	B.	29	77	0.16	-0.15	
	✓C.	174	83	0.38	0.28	
	D.	55	59	0.19	-0.01	
	E.					
92.	A	53	72	0.19	-0.06	Apparently difficult Discriminating Good distracters, except D, which needs improvement
	✓B.	184	87	0.41	0.29	
	C.	34	86	0.19	-0.16	
	D.	54	61	0.18	-0.02	
	E.					

p = Difficulty index

r = Discriminations index

✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
93.	A.	62	67	0.20	-0.02	Rather difficult Rather poorly discriminating <u>Needs improvement</u>
	B.	92	84	0.25	0.02	
	✓C.	135	99	0.37	0.11	
	D.	33	53	0.14	-0.06	
	E.					
94.	A.	49	65	0.16	-0.05	Rather difficult Not discriminating at all <u>Needs improvement</u>
	✓B.	79	80	0.27	-0.01	
	C.	84	82	0.27	0.01	
	D.	110	75	0.27	0.11	
	E.					
95.	A.	30	64	0.14	-0.10	Apparently difficult Discriminating Good distracters, except D, which needs improvement
	B.	53	76	0.21	-0.07	
	✓C.	185	97	0.42	0.27	
	D.	54	65	0.20	-0.03	
	E.					
96.	A	56	65	0.19	-0.03	Rather difficult Very poorly discriminating <u>Needs improvement</u>
	B.	102	89	0.30	0.04	
	C.	92	81	0.27	0.03	
	✓D.	72	67	0.20	0.02	
	E.					

p = Difficulty index

r = Discriminations index

✓ = Correct answer

Table 14 (Cont.)

Item		Upper Group	Lower Group	p	r	Item Evaluation
97.	A.	59	73	0.19	-0.04	Rather difficult Very poorly discriminating <u>Needs improvement</u>
	✓ B.	82	65	0.25	0.05	
	C.	100	104	0.28	-0.01	
	D.	81	61	0.23	0.06	
	E.					
98.	A.	66	81	0.22	-0.05	Rather difficult Very poorly discriminating <u>Needs improvement</u>
	✓ B.	83	70	0.23	0.04	
	C.	106	92	0.31	0.04	
	D.	66	56	0.19	0.03	
	E.					
99.	✓ A.	126	78	0.31	0.15	Rather difficult Rather poorly discriminating <u>Needs improvement</u>
	B.	55	67	0.19	-0.04	
	C.	73	93	0.26	-0.06	
	D.	66	61	0.19	0.02	
	E.					
100.	A	51	75	0.20	-0.07	Rather difficult Discriminating <u>Needs improvement</u>
	B.	53	60	0.17	-0.02	
	✓ C.	138	71	0.31	0.20	
	D.	75	87	0.26	-0.04	
	E.					

p = Difficulty index

r = Discriminations index

✓ = Correct answer

Note: Average p value = 0.43

Average r value = 0.29

See correct answer for p and r values



Curriculum Vitae

Researcher's Name: Siriluck Usaha

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Education:

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1971	B.Ed. (Hons.)	English	Sri Nakarinwirot University, Mahasarakam
1974	M.Ed.	English Language & Literature	Sri Nakarinwirot University, Prasanmit
1982	Ph.D.	Education	Southern Illinois University, Carbondale, U.S.A.

Fields of Specialization: English for Academic Purposes (EAP) Writing,
Oral English, and Second Language Teaching

Research Completed:

1. Effectiveness of Southern Illinois University's General Education Program (1979)
2. The Use of ACT Scores as CLEP Predictors (1982)
3. Black Identities in Langston Hughes' Short Stories (1992)
4. Effectiveness of Suranaree University of Technology's English Placement Test (2000)

Ongoing Research: 1. SUT Students' English Language Needs Analysis in the
Workplace (with 2 other co-researchers, 2000-2001)
2. Coping Strategies of SUT Graduate Students in Writing
Tasks Across the Curriculum (2000-2001)