

An Analysis of the Effects of Ability Grouping on Student Learning in University-Wide English Classes

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Abstract

The aim of this study is to analyze college students' and English teachers' attitudes toward between-class ability grouping, and to gain more insight into the effects of homogeneous placement on learning a foreign language. Statistical methods are used to ascertain: (1) how students perceive the effects of ability grouping on learning English from various perspectives, (2) whether there are significant level effect and timing effect on students' perceptions of ability grouping, and (3) whether teachers show more positive or negative attitudes to the grouping arrangement. Subjects included 582 college students and 34 English teachers from Da Yeh University. All the students were placed into four levels of classes according to ability. At the time the survey was conducted, they were either near the end of the first-year English program or the end of the second-year program. Research findings indicate that the majority of the students and teachers show evident support for ability-grouped class placement. The interaction effect between level and timing is found to be non-significant. It is important to note that whenever there is a significant timing effect, students in the second-year program hold less positive attitudes towards the effect of the homogeneous grouping arrangement than those in the first year. When a level effect is significant, lower-level students show stronger support for the grouping practice than those in the higher ability level.

Keywords: ability grouping, tracking, learning motivation

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I. Introduction

Is ability grouping an effective means of dealing with differences in student abilities? Does ability grouping boost or inhibit student learning? Is ability grouping more beneficial to high achievers or to low achievers? These kinds of questions pertaining to ability grouping have been the subject of debate in education for many decades. According to Kulik (1992), ability grouping has been in practice in schools for 100 years.¹ The earliest reviews of research on this topic were found in the 1920s and early 1930s when there was a mental testing movement in American education (Kulik, 1992). Thus far, the topic of ability grouping has produced a great deal of research concerning its effects on student learning. George and Rubin (1992) noted that there may have been more than 500 studies on this topic over the last half century.² Almost all the research and reviews published in American and European journals were carried out in the contexts of elementary schools, middle and high schools. Just as there is a lack of consistency in research findings due to various school and classroom factors and other variables such as curriculum differentiation (Ireson, Hallam & Hurley, 2005)³, there is a lack of agreement among researchers and educators on the effects of homogenous grouping (Loveless, 1998; Tieso, 2003).⁴ Loveless (1998) found that during the 1980s, many schools and school districts across the United States began to “detrack,” which involved placing students into mixed-ability classes instead of like-ability classes. There was even an anti-ability-grouping movement in the 1990s (Fiedler-Brand, Lange & Winebrenner, 1992).⁵ For the last few decades, there has been a trend of reforming the ability grouping practice.

Ability grouping has also been widely practiced in secondary education in Taiwan since the Ministry of Education enacted an important policy to allow ability

¹ Kulik, J. A., “An analysis of the research on ability grouping: Historical and contemporary perspectives.” Storrs, (CT: National Research Center on the Gifted and Talented, 1992).

² George, P. S. & Rubin, K., “Tracking and ability grouping in Florida: Educator’s perceptions.” *Florida Educational Research Bulletin*, Vol.23, No.3-4 (1992), pp.1-52.

³ Ireson, J., Hallam, S. & Hurley, C., “What are the effects of ability grouping on GCSE attainment?” *British Educational Research Journal*, Vol. 31 (2005), pp.443-458.

⁴ Loveless, T., “The tracking and ability grouping debate.” (Washington, D.C.: Thomas B. Fordham Foundation, 1988).

⁵ Fiedler-Brand, E., Lange, R. E., & Winebrenner, S., “Tracking, ability grouping and the gifted.” (Norristown, PA: Pennsylvania Association for Gifted Education, 1992).

grouping in junior high schools in 1969 (Liang, 2003)⁶. Although many changes and adjustments have been made to the policy in response to educational reform over many years, homogeneous placement continues to be a common practice in either junior high or high schools in Taiwan. Often, only high-ability students are grouped. They may be grouped for specific subjects, such as math and English, but not all other subjects. Most students are still instructed in mixed-ability classes. As in many other countries, between-class ability grouping has long remained one of the most hotly debated topics in secondary education.

In contrast to the movement against ability grouping in American education, this practice has gained more popularity in Taiwanese higher education in the past few decades. Placement of students into groups according to ability is practiced in the colleges and universities in Taiwan to enhance learning of English as a foreign language. It was first implemented in the late 1970s and did not become a more common practice until a decade later. The Fu Jen Catholic University started assigning students in the School of Foreign Languages to different levels of English classes in 1977 (Chang, 1987, 1992)⁷. Some schools, including Chinese Culture University, Chung Yuan Christian University, National Cheng-Chi University, and Soochow University, started the homogeneous placement programs in the late 1980s and 1990s (Chien, 1987; Yu, 1994)⁸. In 2001, the Ministry of Education enacted a policy encouraging achievement grouping in all universities (Sheu & Wang, 2006)⁹. More schools began to change their English programs to group students of similar ability levels for instruction. Feng Chia University started a new Freshman English Program in 2005, offering classes at four different levels in accordance with students' English proficiency (Luo, 2005)¹⁰. National Kaohsiung University of Applied Science also followed the trend in the same year to promote student achievement (Sheu & Wang, 2006).

⁶ Liang, T. L., "Cooperative learning: An alternative to ability grouping," *Journal of Paise Humanities and Social Sciences*, No.2 (2003), pp.141-175.

⁷ Chang, B.Y., "A descriptive case report of TEFL program planning for non-English majors: The Fu-Jen experience," Proceedings of the Fourth Conference on English Teaching and Learning in the Republic of China, 1987, pp.205-212.

⁸ Chien, C. N., Ching, H. L., & Kao, L. H., "Study on a different leveling English instruction policy for 'Freshman English' in Chung Yuan Christian University," *Chung Yuan Journal*, Vol.30, No.4 (2002), pp.505-516.

⁹ Sheu, C. M. & Wang, P. L., "A case study of student perceptions toward between-class ability grouping in freshman practical English class." *K.U.A.S. Journal of Humanities and Social Sciences*, No.3 (2006), pp.111-140.

¹⁰ Luo, B., "Achievement grouping and students' progress in freshman English classes at Feng Chia University." *Feng Chia Journal of Humanities and Social Sciences*, No.11 (2005), pp.253-279.

The main reason why homogeneous grouping in learning a foreign language becomes more popular in higher education in Taiwan is because students vary greatly in their levels of English proficiency. Even elementary school children have differential English learning experiences and receive varying amounts and quality of English instruction. Many educators notice that the results of the high-school entrance exam scores in the past few years have shown a so-called “extreme twin peaks” phenomenon. This means the discrepancy between the performance of high achievers and low achievers is becoming more distinct and this situation is becoming worse. The performance of low achieving students is lagging further and further behind that of high achieving students. Teaching English in mixed-ability classes becomes a more challenging task for all English teachers across different grades.

Moreover, students are not making much progress in raising their English proficiency levels all these years. An investigation by the Educational Testing Service (ETS) in 2007 showed that the average TOEIC score of Taiwan students ranked fourth from the bottom on the list of the Asian countries for two consecutive years, in both 2005 and 2006. Similarly, Taiwan students’ average score for the new TOEFL-IBT test ranks fourth from the bottom in 2006 when compared with other 27 Asian countries. Another surprising fact is that nearly sixty percent of college graduates from one of the universities in southern Taiwan failed to pass the elementary level GEPT test and could not graduate as scheduled in the summer of 2007. GEPT is the General English Proficiency Test designed by the Language Training and Testing Center in Taiwan. People who pass the elementary level of this test have a proficiency level equivalent to that of junior high school graduates. Sheu and Wang (2006) also found that only 1.3% out of 1826 freshmen during the 2003 academic year passed both the elementary level GEPT listening and reading tests. Due to many discouraging test results, a growing number of schools are trying to reform their English programs by organizing students of similar ability into the same classrooms in the hope that English classes can be more interesting and effective for the students and result in increased student achievement.

The purpose of this study is to analyze college students’ and teachers’ attitudes toward between-class ability grouping, to understand more about how homogeneous placement affects student learning from different perspectives, and to gain more insight into the effects of this practice on learning a foreign language. The study aims to answer the following three research questions: (1) whether students hold more positive or negative attitudes to ability grouping, (2) whether there are significant grouping effects and timing effects on students’ perceptions of homogeneous

placement, and (3) whether teachers are more opposed to or supportive of the homogeneous grouping arrangement.

II. Controversy Related to Ability Grouping

The term ability grouping historically referred to dividing elementary school students into small groups within classes for reading instruction (Loveless, 1998). Within-class grouping is still the most common type of grouping at the elementary grades of American education (Slavin, 1993)¹¹. The type of ability grouping referred to in this paper is the between-class homogeneous grouping of students. Although the two terms ability grouping and tracking referred to different forms of grouping practice in the history of American education, they are now used interchangeably in research studies to describe various types of between-class grouping (Loveless, 1998).

Grouping students according to ability has been one of the most controversial issues in American elementary- and secondary-school education. The pros and cons of ability grouping have been listed in countless research studies (Hopkins, 2003; Kulik, 1992; Kulik and Kulik, 1982; Slavin, 1993; Tieso, 2003). Supporters of ability grouping propose that the practice benefits both teachers and students. Teachers can more easily adapt the pace and content of their instruction to students' needs. They can provide more reinforcement and support to low-achievers and provide a more challenging curriculum to high achievers. Proponents contend that low achievers feel more confident and participate more in class when they are grouped with other low-achieving students. High achievers are challenged and stimulated when grouped with intellectual peers. They are more able to maintain learning motivation in homogeneous groups, but languish when grouped with lower achievers.

In contrast to the supporters' position, opponents hold that grouping students by ability hurts students, particularly those in average and below-average level classes. These students may be taught by teachers who are less experienced and able and have lower expectations for them. They may receive a lower quality and slower pace of instruction. Also, these low-performing students can suffer from decreases in self-esteem and academic motivation. Critics propose that students in low-achieving groups need the challenge and competition from other brighter students to stimulate them, and to provide positive role models for them. They contend that grouping by

¹¹Slavin, R. E., "Ability grouping in the middle grades: Achievement effects and alternatives." *Elementary School Journal*, Vol.93, No.5 (1993), pp.535-552.

ability is not beneficial for any student. Further, it might widen the achievement gap between the lower and higher groups. Supporters' and critics' views are far from united on this issue. Braddock and Slavin (1992)¹² noticed that proponents are more concerned about the "effectiveness" of instruction, while opponents are more concerned with "equity".

George and Rubin (1992) investigated 600 Florida educators' attitudes toward ability grouping practice in this state. Almost 80% of Florida's students have experienced ability grouping during their school day. The research reported that nearly a third of the respondents perceived that some students were placed in lower groups because of disciplinary problems. More than 45% agreed that disproportionately high numbers of minority students were organized into low-ability groups. More than 50% of the respondents believed that "good" teachers are more likely to be assigned to higher level classes. A majority of the educators perceived that in heterogeneous settings, higher level students can do as well as in homogeneous classes and lower level students can have increased self-esteem. Most of them are not supportive of ability grouping for its being inequitable and ineffective. However, they are uncertain about the efficacy of its alternatives and receive a great deal of opposition from parents of high ability students for these parents believe homogeneous placement is the best arrangement for their children.

Research on the grouping effects on student achievement is quite extensive. The review of literature shows that the major sources of opposition to ability grouping come from Slavin (Tieso, 2003)¹³. Slavin (1987, 1990)¹⁴ conducted a set of meta-analyses on findings of grouping at Johns Hopkins University and concluded that the effects of ability grouping are nearly zero for students of all levels in elementary and secondary schools. He considered this practice ineffective and damaging to many students, and only to be used in the instruction of math and reading

¹²Slavin, R. E., "Are cooperative learning and "untracking" harmful to the gifted?" *Educational Leadership*, Vol.48, No.6 (1991), pp.68-71.

¹³Tieso, C. L., "Ability grouping is not just tracking anymore," *Roepers Review*, Vol.26, No.1 (2003), p.29.

¹⁴Slavin, R. E., "Ability grouping and student achievement in elementary schools: A best-evidence synthesis." *Review of Educational Research*, Vol.57, (1987), pp.293-336; Slavin, R. E., "Achievement effects of ability grouping in secondary schools." *Review of Educational Research*, Vol.60, No.3 (1990), pp.471-499.

(Slavin, 1988; Braddock & Slavin, 1992)¹⁵. Also, Slavin expressed concerns over the self-concept of those placed in the groups of low performance (Slavin, 1990).

Kulik and Kulik (1982)¹⁶ also applied meta-analytic methods to findings of 52 studies on ability grouping. They reported that the effects are “positive, however slight” on lower and middle level students’ achievement, attitudes toward subjects being taught, and self-concept. The grouping effects on student attitudes toward the subject being taught and toward the school were “clearer” than on student achievement. The only type of grouping that has stronger positive effect is the placement of high ability students in honors classes for special enriched instruction. They concluded that the effects of homogeneous grouping are negligible; however, “there is no evidence that homogeneous grouping is harmful.”

Besides criticizing the studies Slavin reviewed for “being small-scale and of limited duration”, Hoffer & Gamoran (1993)¹⁷ argued that the results may reflect “variability in the ways grouping is implemented.” Further, they indicated that varied results in the research studies may reflect differences in classroom instruction. Hoffer and Gamoran examined three factors that may lead to ability-grouping differences in achievement: instructional objectives, quantity of instruction, and quality of instruction. They noticed that teachers in high ability classes are more likely to emphasize conceptualization, problem solving, and creative thinking, while teachers in lower ability classes emphasize more on the learning of basic skills. Also, not students at all levels receive the same quantity and quality of instruction. It’s important to have more information about the effects of instructional variables before jumping to any conclusion.

A large national survey conducted by the National Education Longitudinal Study (NELS) starting in 1988 reported that race is weakly related with tracking (Loveless, 1998). When compared with white students, African-American students had a 10% advantage in being placed into the higher level group. This finding is in direct contradiction to the conventional belief that ability grouping is “racist.” Moreover, NELS showed that low achievers tended to learn more in mixed-ability math classes,

¹⁵Braddock, J. H. & Slavin, R. E., “Why ability grouping must end: Achieving excellence and equity in American education.” Paper presented at the Common Destiny Conference at Johns Hopkins University, 1992.

¹⁶Kulik, C. -L. C. & Kulik, J. A., “Research synthesis on ability grouping.” *Educational Leadership*, Vol.39, No.8 (1982), pp.619-621.

¹⁷Hoffer, T. B. & Gamoran, A., “Effects of instructional differences among ability groups on student achievement in middle-school science and mathematics.” (ERIC Document Reproduction Service No. ED 363 509), 1993.

while average and above average students suffered achievement losses, which outweighed the lower level students' gains. The NELS studies contended that detracking only benefits students in lower level but fails to improve achievement for students in other levels.

Although hundreds of studies since the 1920s have proposed that the ability grouping practice sometimes benefits high-group students but has trivial effects on other groups of students, the question of whether homogeneous grouping is a better arrangement than mixed-ability grouping is still under heated debate (Loveless, 1998). Because of the small overall effect size from meta-analyses of extensive research studies, many researchers focus on the positive effects but some others focus on the negative effects (Jaeger & Hattie, 1995)¹⁸. Researchers such as Fiedler-Brand, Lange, & Winebrenner (1992), Kulik (1992), and Rogers (1993, 2002)¹⁹ support the practice of ability grouping, while many others object to the practice (Braddock & Slavin, 1992). No consensus on this issue has been reached over the last century. Slavin proposed that schools should begin abolishing ability grouping, while Kulik argued that it would be a mistake to quit tracking. Rogers (2002), being on the side of Kulik, reasoned that "there is nothing in the research at present to suggest that not grouping by ability is more effective or appropriate for any level of ability." She suggested that ability grouping benefits the gifted and talented students and does no harm to any students placed in other levels. Until a more effective and equitable alternative to ability grouped class assignment is approved by all researchers and educators, the so-called "Slavin-Kulik debate" will continue.

III. Research on Ability Grouping Practice in Taiwan

Compared with the long history of research on ability grouping in American education, research on this topic in Taiwan is more limited. Many researchers begin to focus on the topic when their schools started to change their English programs from heterogeneous grouping to homogeneous grouping. After Soochow University started enforcing its homogenous placement program in 1992, Yu (1994)²⁰ conducted a

¹⁸Jaeger, R. M. & Hattie, J. A., "Detracking America's Schools: Should we really care?" *Phi Delta Kappan*, Vol.77, No. 3 (1995), pp.218-219.

¹⁹Rogers, K. B., "Grouping the gifted and talented: Questions and answers." *RoepersReview*, Vol.16, No.1 (1993), pp.8-12; Rogers, K. B., "Grouping the gifted and talented: Questions and answers." *RoepersReview*, Vol.24, No.3 (2002), pp.102-107.

²⁰Yu, C. F., "The assessment of ability grouping in the college lab program: The Soochow experience." *Soochow Journal of Foreign Languages and Literature*, No.10 (1994), pp.45-77.

17-question survey four months after the program was put into practice. The subjects were 2448 sophomores, who were not grouped during their freshman year, but were organized into three different levels of lab courses in the second year. She concluded that “low level students show a strong preference for ability grouping.” The subjects placed in the basic level felt they were less pressured and more motivated. They believed this placement program helped them improve their listening and speaking skills. None of them felt their self-esteem was harmed due to this practice. Although intermediate and high level students didn’t show as much strong preference for the homogeneous placement, still, most of them showed positive attitudes toward ability grouping. They felt “teachers’ demands were more reasonable and the teacher’s way of teaching better reflected their level.”

Tsao (2003)²¹ conducted a survey at the end of the first semester of 2001 to analyze the impact of ability grouping on 865 vocational students at Fooyin Institute of Technology. These subjects included 4-year program college students and 5-year program junior college students. The results showed that many students even questioned the reliability of the placement test called Test of English Language Ability (TELA). Students who favored homogeneous grouping were only 10 percent higher than those who objected to this practice. No significant difference was found in students’ perceptions of ability grouping among the three ability groups. Tsao concluded that the quality of instruction plays a more important role in the learning process.

A language school, Wenzao Ursuline College of Languages, also decided to implement a new English program in 2000 to group students by ability between classes. In Chen, Lin and Feng’s (2004) study, these five-year junior college students were grouped during the second year into three levels of listening classes and a 19-item survey was administered to them towards the end of the second semester in 2001. They reported that high-ability groups feel more pressure because of higher expectations from their classmates and teachers. Students placed in the intermediate level and low level groups showed more positive attitudes toward ability grouping. Although more than half of the respondents expressed a preference to stay in their original classes, they also showed support for the school’s new policy.

Sheu and Wang (2006) investigated students’ stance on the grouping plan at National Kaohsiung University of Applied Sciences after the school started

²¹Tsao, C. H., “The impact of ability grouping on foreign language learners: A case study.” *Hwa Kang Journal of TEFL*, No.9 (2003), pp.79-102.

implementing this new practice in 2005. According to the researchers, the majority of the students came from 3-year vocational high schools. The questionnaires were administered to them at the end of the first semester of the 2005 academic year. The findings suggest that most students agreed with the grouping arrangement. Although high-ability students felt more stressed in the homogeneously grouped classes than the other two levels of students, they were also the ones who mostly agreed that ability grouping was beneficial for their learning and helped them become more interested in learning English.

Many studies on the grouping effects have been carried out in either five-year junior colleges or schools in the vocational education system. Fewer studies have been conducted in the regular four-year college system. Also, no work has been done to analyze the effect of timing on the findings. In the present study, participants included both students who had completed the first-year new placement program and those who had completed the second-year program.

IV. Method

A. Ability Grouping Practice at Da Yeh University

Students at Da Yeh University were originally required to take 6-credit / 8-hour English courses. In the 2005-2006 academic year, Da Yeh University started implementing a new English program, including a two-year Basic English program for freshmen and sophomores. All freshmen entering Da Yeh University now are required to take the elementary level GEPT listening and reading test. The scores are then used to place students into four levels of English classes, namely basic, intermediate, high intermediate, and advanced. This homogeneous placement program includes 8-credit / 16-hour required courses. Every student is required to take one English Listening and Speaking course and one English Reading and Writing course every semester for two consecutive years. Each required course is listed as 1-credit / 2-hour.

B. Subjects

The subjects of this study included 582 college students at Da Yeh University. 492 of them were the first- and second-year students who had enrolled at the university after the new English program had been put into effect in 2005. These were the primary test subjects out of the 582 students. 53% were males and 47% were

females. Only 24% had the experience of being grouped based on ability before entering college. The freshmen were near the end of the first-year English program, while the sophomores were at the end of the second-year program when the survey was carried out in the 2006-2007 academic year. They were all divided into four levels of English classes, ranging from basic to advanced, according to their scores on the GEPT test as soon as they entered the school. Two to three classes of students were selected from each level and each year to participate in the study.

The remaining 90 subjects were juniors and seniors, who had been instructed in both heterogeneous and homogeneous classes. They all had the experience of being placed in mixed-ability English classes during their first two years in college before the school started implementing the ability grouping practice. They had to take the required English course because they either did not take it during their freshman or sophomore year or failed it previously. These students were all placed in the lower level classes. 47 were taking the first-year English program, while 43 of them were taking the second-year program. Table 1 shows the number of subjects in each ability group.

34 English teachers teaching the required university-wide English courses also participated in the study. They were either full-time teachers from the department of English Language or part-time teachers from the International Language Center at Da Yeh University. They were all approaching the end of the one-year courses they were teaching when they completed the survey. Sixty-five percent of them had the experience of teaching English in mixed-ability classes at Da Yeh University.

Table 1

Number of Subjects Taking First- and Second-Year English Program at Each Level

	Basic I *	Basic II	Intermediate	High-intermediate	Advanced	Total
First-Year	47	64	59	61	61	292
Second Year	43	62	62	59	64	290

* Students in this group are juniors or seniors who had experienced being instructed in both heterogeneous and homogeneous classes.

C. The Instrument

The instrument used in the study is a survey on students' attitudes toward ability grouping, a 18-item questionnaire. These items were written by the researcher with references to the instruments used in other studies (Chen, Lin, & Feng, 2004; Chien &

Ching, 2002; Yu, 1994). They were presented in a Likert six alternative response format, ranging from strongly disagree to strongly agree. The internal consistency reliability (α) for this instrument is 0.8325, calculated by using Cronbach's coefficient alpha formula. Items from the instrument were mainly designed to measure how students perceive the effects of ability grouping on their confidence, motivation, interest, academic pressure, listening ability, and reading comprehension ability. Items regarding teaching materials used and teachers' instructional methods were also included. The data collection procedure was completed near the end of the 2006-2007 academic year when the freshmen were about to finish their first-year English program and the sophomores were about to complete their second-year program. The survey conducted was in Chinese. Some of the wordings in the version given to the teachers were revised; however, the content of the items is the same.

D. Data Analysis

To address the research questions concerning students' perceptions of between-class ability grouping, statistical analyses are performed respectively on the data collected from the full student samples, freshmen and sophomores, and the teachers.

1. To ascertain whether students show more positive or negative attitudes to ability grouping, percentages of all the samples' responses are calculated. A chi-square test is then used to test the equality of students' preference for the six alternatives in each question. Responses of 90 juniors and seniors who had been arranged in mixed-ability classes before and were placed in ability-grouped classes at the time the survey was conducted are also analyzed to examine whether they have different perceptions of the grouping practice.

2. To investigate whether ability levels and years of learning have any significant effects on students' attitudes to homogeneous grouping, a two-way multivariate analysis of variance is performed on freshmen's and sophomores' item scores. The two-way MANOVA is used to test the following effects: level, timing, and the interaction between level and timing. Follow-up tests will be conducted to make post hoc comparisons among the means if level effect is found to be significant while interaction is found to be non-significant.

3. To have a better understanding of teachers' attitudes toward ability grouping, percentages of their responses to each question are examined. The chi-square test is then used to test the significant difference in varying degrees of agreement for each question.

V. Results and Discussion

A. Analysis of Percentage Differences

To examine college students' attitudes toward ability grouping, percentages of the 492 subjects' responses are first calculated and reported in Table 2. Chi-square test results find significant differences in the proportions of subjects selecting each response for all the questions. In this part of analysis, students are divided into two groups. One includes participants who were about to finish the first-year English program and the other includes those who were going to complete the second-year program. The findings reveal that the majority of the students, either in the first year or second year program, respond positively to homogeneous placement.

For the first question, 14.7% of students in the freshman program and 21.5% of the students in the second-year program show various degrees of disagreement to the statement that ability grouping is beneficial to their English learning. As many as 85.3% of the students taking the first-year program and 78.5% of those taking the second-year program show varying degree of agreement to this item. More than half of the subjects select "Slightly Agree" or "Agree" for almost all the questions, including questions of whether grouping by ability helps them feel less negative pressure about learning, develop more confidence, and increase their motivation to learn (questions 2, 3, and 4). As expected, near 70% of the subjects disagree with the statement that ability grouping causes more anxiety (question 12). It's also worth noticing that more than one third of students in the second-year program disagree that ability grouping helps ease the pressure and increase motivation to learn. Similarly, about one third of the students in both groups disagree that ability grouping helps reduce anxiety.

Table 2

Percentage and Chi-square Value of Students' Responses to Questions about Ability Grouping

Item / Year of program	(X^2) *	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1. Beneficial to my English learning							
First Year	(232.527)	1.2	4.5	9.0	40.0	38.8	6.5
Second Year	(181.186)	3.2	4.9	13.4	43.7	26.3	8.5
2. Helps ease the pressure							

First Year	(117.816)	2.9	5.3	22.0	34.3	26.1	9.4
Second Year	(70.126)	5.7	8.9	23.1	30.0	22.3	10.1
3. Helps build more confidence							
First Year	(170.812)	2.9	3.7	18.4	41.6	26.1	7.3
Second Year	(123.275)	4.0	6.1	19.4	37.7	23.9	8.9
4. Helps increase motivation							
First Year	(138.535)	2.9	6.1	22.4	33.9	29.8	4.9
Second Year	(114.482)	4.5	8.5	24.7	36.4	19.0	6.9
5. Teaching materials are more suitable							
First Year	(129.376)	4.5	5.3	19.2	34.3	30.2	6.5
Second Year	(145.721)	6.5	6.9	13.4	41.7	24.3	7.3
6. Teaching materials help me become more interested							
First Year	(158.029)	2.4	9.0	28.2	38.4	19.6	2.4
Second Year	(139.988)	4.9	8.5	24.7	39.3	18.6	4.0
7. Teachers' instructional methods are more suitable							
First Year	(173.359)	1.2	4.9	18.8	42.0	25.3	7.8
Second Year	(157.672)	3.6	6.5	19.0	40.5	25.5	4.9
8. Teachers' instructional methods help me become more interested							
First Year	(175.318)	0.8	6.9	25.3	41.2	21.2	4.5
Second Year	(169.429)	3.6	10.1	20.2	43.7	19.0	3.2
9. The key to further improvement is my attitudes toward learning							
First Year	(204.118)	0.8	2.0	4.5	21.6	40.0	31.0
Second Year	(184.441)	1.2	1.2	6.9	21.5	36.0	33.2
10. The key to further improvement is my learning strategies							
First Year	(189.424)	0.8	1.6	5.3	27.3	38.4	26.5
Second Year	(163.113)	1.6	2.0	8.9	28.3	37.7	21.5
11. The key to further improvement is teachers' instructional methods							
First Year	(131.629)	1.6	5.3	24.5	34.7	25.7	8.2
Second Year	(152.522)	4.5	3.2	17.0	40.5	25.5	9.3
12. Causes more anxiety							

First Year	(125.457)	7.8	26.9	33.5	24.1	5.3	2.4
Second Year	(143.146)	5.3	27.5	34.8	24.3	6.5	1.6
13. Benefits my listening ability							
First Year	(243.106)	0.4	2.4	16.3	48.6	25.3	6.9
Second Year	(164.085)	3.6	6.1	20.2	41.7	23.5	4.9
14. Benefits my reading comprehension ability							
First Year	(216.412)	0.4	4.1	18.4	46.1	24.9	6.1
Second Year	(166.563)	2.8	7.3	19.4	41.3	25.1	4.0
15. I am appropriately placed by my listening ability							
First Year	(166.355)	2.0	6.1	18.4	41.2	26.1	6.1
Second Year	(146.206)	5.3	5.7	20.6	38.5	25.9	4.0
16. I am appropriately placed by my reading ability							
First Year	(133.735)	2.0	6.5	20.4	38.4	23.7	9.0
Second Year	(153.202)	5.7	5.3	19.8	40.9	23.5	4.9
17. Achievement level should be assessed annually							
First Year	(81.571)	4.1	9.4	18.8	30.2	27.3	10.2
Second Year	(58.466)	4.5	10.1	16.2	29.6	22.7	17.0
18. No impact on the improvement of English ability							
First Year	(138.878)	5.7	15.9	40.4	23.7	11.0	3.3
Second Year	(96.069)	4.0	14.6	31.2	30.0	12.6	7.7

* All the chi-square tests are significant at the 0.001 level.

Concerning teaching materials used and teaching methods (questions 5 to 8), over sixty percent of the respondents, ranging from 60.4 to 75.1%, favor the placement practice. However, about one third of the students in either the first- or second-year program show a negative perception of ability grouping because they disagree that the teaching materials and instructional methods used in the ability-grouped classes help them maintain interest in learning English.

Since students are not only placed in ability-grouped listening classes, but also in ability-grouped reading classes, their perceptions of grouping effects on their listening and reading performance levels were also examined (questions 13 and 14). A high percentage of subjects agree about the benefits of the grouping placement. 80.8% and 70% of the respondents, in the first- and second-year English program respectively, hold favorable attitudes toward the effects of grouping on their listening ability. A slightly lower, but still high percentage of the students, 77.1% and 70.4%, in the first-

and second-year program respectively, consider the grouping plan beneficial for enhancing their reading comprehension performance.

Further, more than 70% of the subjects in the first-year program agree that they are appropriately placed in the English listening and reading classes (questions 15 and 16). More than two thirds of the students in the second-year program also agree that they are placed in the appropriate levels of listening and reading classes. Nevertheless, about one third of the students in the second-year program do not consider themselves to have been placed in the appropriate ability level. Near 70% of students contend that achievement level should be reevaluated every year (question 17).

Although the majority of students are in favor of the grouping practice, analysis of the data also reveals some interesting findings. When asked if the key to further improvement in English is their own learning attitudes or learning strategies rather than ability grouping (questions 9 & 10), the overwhelming majority of students agree. For instance, of the 245 subjects taking the first-year program, 92.7% and 92.2% agree with the views stated in questions 9 and 10 respectively. More than one third of the subjects strongly agree that one's own learning attitude is the most important thing to improve English ability. For question 11, a much lower percentage of students agree that the key to further improvement is teachers' instructional method when compared with their responses to the above-mentioned items (questions 9 and 10).

Unlike students' responses to the other items, their responses to the last question about the impact of ability grouping on enhancing English ability are more evenly divided. Near 40% of the students in the first-year program show varying degree of agreement to the statement "I agree that ability grouping does not have any impact on the improvement of my English ability," while 62% do not agree with this statement. Interestingly, a higher percentage of students (50.2%) in the second-year program indicate that the grouping placement has no impact on their progress, while 49.8% of them disagree.

Responses of 90 juniors and seniors who had experienced being placed in both mixed-ability classes and ability-grouped classes at Da Yeh University were also examined separately. The findings show results that are consistent with and similar to those presented in Table 2 (see Appendix A). However, these students show even stronger support for ability grouping in some aspects. For questions concerning teaching materials and teachers' instructional methods (questions 5-8), there is an even higher percentage of students showing agreement to these items when compared with the responses of the full samples. The majority of them consider the teaching materials and instructional methods used in lower-ability classes more suitable for

them and helpful to increase their interest in learning. Moreover, it is apparent that an even higher percentage of these subjects agree that being grouped with students of similar ability helps them reduce the pressure and anxiety of learning and improve their learning motivation.

B. Analysis of Mean Differences

A two-way MANOVA is performed on 492 freshmen's and sophomores' item scores to test whether there are significant mean differences. Juniors and seniors are excluded from this part of the analysis because they tend to have different learning experience from the majority of the subjects. The purpose of this part of data analysis is to study the effects of ability levels and years of learning on students in homogeneous classes. The two-way MANOVA is used to test the following effects: level, timing, and the interaction between level and timing. The MANOVA results for each item are presented in Table 3.

The findings show that the interaction effect between level and timing is non-significant for all the items. Timing effect is only significant for four items, namely questions 1, 13, 14, and 18. These are questions pertaining to the overall benefit of ability grouping. For all these questions, freshmen have significantly higher mean values than sophomore students. The difference is particularly highly significant for question 13, which indicates that students in the first-year English program perceive stronger and more positive effects of ability grouping on listening ability than those who are near the end of the second-year English program. It should be noticed that the timing effect is on the margin of being significant for question 14, which concerns the benefit of ability grouping for enhancing reading performance. There is a smaller difference in the mean values between freshmen (4.09) and sophomores (3.91) (see Appendix B).

Table 3

Multivariate Analysis of Variance Results for Students' Responses by Year and Ability Level

Item / Source of Variation	df	Mean Square	F	F-prob.
Q1. Year	1	4.634	4.296	.039 *
Level	3	2.103	1.950	.121
Year x Level	3	.167	.155	.927
Q2. Year	1	4.052	3.029	.082
Level	3	31.642	23.656	.000 *

	Year x Level	3	.812	.607	.611
Q3.	Year	1	.767	.629	.428
	Level	3	11.119	9.129	.000 *
	Year x Level	3	.285	.234	.873
Q4.	Year	1	4.087	3.151	.076
	Level	3	4.278	3.299	.020 *
	Year x Level	3	1.637	1.262	.287
Q5.	Year	1	.594	.424	.515
	Level	3	8.542	6.099	.000 *
	Year x Level	3	2.606	1.861	.135
Q6.	Year	1	2.899E-04	.000	.987
	Level	3	15.650	14.260	.000 *
	Year x Level	3	.533	.486	.692
Q7.	Year	1	3.044	2.791	.095
	Level	3	9.630	8.829	.000 *
	Year x Level	3	.665	.610	.609
Q8.	Year	1	2.457	2.328	.128
	Level	3	7.570	7.173	.000 *
	Year x Level	3	.277	.263	.852
Q9.	Year	1	4.478E-02	.043	.835
	Level	3	7.338	7.116	.000 *
	Year x Level	3	.749	.726	.537
Q10.	Year	1	3.947	3.747	.053
	Level	3	5.588	5.305	.001 *
	Year x Level	3	.597	.567	.637
Q11.	Year	1	.331	.264	.608
	Level	3	1.532	1.220	.302
	Year x Level	3	1.639	1.304	.272
Q12.	Year	1	.283	.237	.627
	Level	3	.580	.485	.693
	Year x Level	3	2.229	1.866	.134
Q13.	Year	1	8.769	8.741	.003 *
	Level	3	1.586	1.581	.193
	Year x Level	3	.117	.117	.950
Q14.	Year	1	4.041	4.031	.045 *

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	Level	3	3.226	3.217	.023 *
	Year x Level	3	.239	.239	.870
Q15.	Year	1	2.857	2.331	.127
	Level	3	1.059	.864	.460
	Year x Level	3	.271	.221	.882
Q16.	Year	1	3.120	2.412	.121
	Level	3	2.158	1.668	.173
	Year x Level	3	.158	.122	.947
Q17.	Year	1	.862	.497	.481
	Level	3	3.797	2.190	.088
	Year x Level	3	2.076	1.197	.310
Q18.	Year	1	9.040	6.550	.011 *
	Level	3	3.448	2.498	.059
	Year x Level	3	1.440	1.043	.373

* significant at the 0.05 level

As presented in Table 3, the level effect is found to be significant for 10 out of the 18 questions, which include questions 2 to 10, and question 14. Since the interaction between level and timing is non-significant, the Scheffe test is used to make post hoc comparisons among the four group means. For question 2, the low-achievement group has significantly higher mean value (4.60) than the other three groups. The intermediate group also has significantly higher mean value than the advanced group. Findings of the follow-up test show that homogeneous grouping is more beneficial to low achieving students in terms of reducing pressure to learn English.

Similarly, the lower-ability group has significantly higher mean value than the high-intermediate and advanced groups for question 3, regarding whether ability grouping helps build more confidence in learning. The intermediate group also has significantly higher mean value than the high-achieving group. Regarding question 4, i.e., whether ability grouping helps enhance motivation in learning, the only significant difference is found between students in the basic level and the advanced level. Again, students in the lowest achieving group have more positive attitudes toward the grouping plan.

For four items concerning teaching materials used and teachers' instructional methods (questions 5-8), the highest ability group still has the lowest mean value

compared with all other groups. Similar results are obtained for questions 5 and 8 by conducting Scheffe tests. Both groups of students in the lowest ability level and intermediate level have significantly higher mean values than high achievers. Students in the average and below-average groups show stronger support for ability grouping than high achieving students pertaining to the questions of whether teaching materials properly match their ability levels and whether teachers' instructional methods help increase their interest in learning. As to the question of whether teaching materials used in grouped classes help increase students' interest in learning, three groups, the basic, the intermediate, and the high-intermediate levels, all have significantly higher mean values than the advanced level. The basic level also has significantly higher mean value than the high-intermediate group. When students are questioned about whether teachers' instructional methods properly match their ability levels, the results are similar to the findings for the previous question. The mean value of the higher-achieving group is significantly the lowest among the four means.

Consistent results are found by follow-up tests for items 9 and 10, which examine students' views on whether the key to further improvement in English is their learning attitudes and learning strategies instead of ability grouping. The lower-achieving group has significantly higher mean value than the other groups, although it is quite low compared with the findings of other items. Very high proportions of students in either group show their support for the views addressed in these two items.

A level effect is also found for item 14, which examines the beneficial effect of ability grouping on students' reading comprehension ability. The Scheffe test shows the mean difference between the basic level and the advanced level is on the margin of being non-significant. By using another more powerful and sensitive follow-up test, Tukey's HSD test, both the lower-ability level and high-intermediate level are found to have significantly higher mean values than the advanced level.

No significant main effect, either level or timing effect, is found for the following items: questions 11, 12, 15, 16, and 17. There is no significant mean difference between freshmen and sophomores. The mean difference among the four levels is also non-significant.

C. Analysis of Teachers' Attitudes

Responses from 34 English teachers at Da Yeh University are examined for a better understanding of their perceptions towards ability grouping. 65% of them have the experience of teaching in both mixed-ability classes and ability-grouped classes at

Da Yeh University. Their views about the grouping practice, based on their own teaching experience, can be valuable information to educators and English teachers serving in higher education in Taiwan. The percentages and chi-square values of their responses are reported in Table 4.

Analysis of the data ascertains that the majority of the teachers are in favor of the grouping arrangement. More than 90% of the teachers show varying degrees of support for ability grouping in questions 1-3, 7-10, 12, 13, and 17. Question 7 asks the respondents to agree or disagree with the statement that teachers' instructional methods can properly match students' ability levels. 100% of them show different degree of agreement on this statement. None of them disagrees. They also reach a strong consensus on the following views: (1) after being ability grouped, teachers' instructional methods can help increase students' interest in learning, (2) ability grouping helps students reduce the pressure and anxiety of learning English, (3) ability grouping helps students build more confidence in learning, and (4) ability grouping helps boost students' listening ability. Overall, these teachers perceive the effects of ability grouping on student learning positively. However, they also agree with the following statements: (1) the key to further improvement in English is students' attitudes toward learning rather than the enforcement of ability grouping, (2) the key to further improvement in English is students' learning strategies rather than the practice of ability grouping, and (3) students' achievement levels should be reassessed every year and students should be regrouped accordingly.

Table 4
Percentages and Chi-square Values of Teachers' Responses to Questions about Ability Grouping

Item	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree	X^2 (p) *
Q1.	0	0	2.9	2.9	67.6	26.5	38.000 (.000)
Q2.	0	2.9	5.9	17.6	61.8	11.8	39.235 (.000)
Q3.	0	0	8.8	32.4	50.0	8.8	16.353 (.001)
Q4.	0	2.9	20.6	32.4	38.2	5.9	16.588 (.002)
Q5.	2.9	5.9	2.9	11.8	52.9	23.5	38.353 (.000)
Q6.	5.9	0	20.6	26.5	41.2	5.9	15.118 (.004)
Q7.	0	0	0	11.8	70.6	17.6	21.412 (.000)
Q8.	0	0	8.8	32.4	55.9	2.9	23.882 (.000)
Q9.	0	0	2.9	29.4	26.5	41.2	10.471 (.015)
Q10.	0	0	8.8	38.2	32.4	20.6	6.941 (.074)
Q11.	0	8.8	17.6	50.0	20.6	2.9	22.471 (.000)

Q12.	8.8	47.1	35.3	8.8	0	0	15.176 (.002)
Q13.	0	2.9	5.9	32.4	47.1	11.8	24.529 (.000)
Q14.	0	0	17.6	29.4	47.1	5.9	12.588 (.006)
Q15. **	0	8.8	20.6	32.4	32.4	2.9	12.606 (.013)
Q16. **	2.9	5.9	17.6	26.5	44.1	0	19.576 (.001)
Q17.	0	2.9	5.9	26.5	41.2	23.5	16.882 (.002)
Q18.	11.8	41.2	26.5	14.7	5.9	0	13.353 (.010)

* All the chi-square tests are significant at the 0.05 level except item 10.

** The percentages do not add up to 100% because there are missing values.

Moreover, 88.2% of the teachers show varying degrees of agreement on the question of whether the teaching materials used are more suitable for students' ability levels after students have been grouped. Questions that have lower percentages of teachers showing agreement, ranging from 67.6% to 82.4%, include items 4-6, 11, 14-16, and 18. The majority of the teachers apparently hold positive attitudes towards ability grouping for all the questions on the survey. It should be noticed that 20% - 30% of the teachers show their disagreement in the following aspects: (1) whether ability grouping helps to improve students' learning motivation, (2) whether teaching materials used in ability-grouped classes help students become more interested in learning, (3) whether the key to further improvement in English is teachers' instructional methods, and (4) whether students are appropriately placed by their listening and reading ability.

VI. Summary and Conclusion

The present study investigates how the implementation of between-class ability grouping affects EFL students' learning from various perspectives. To have more insight into the effects of the grouping practice on students, both the level effect and timing effect are analyzed. Not only freshmen who had completed one year of the English program but also sophomores who had completed two years of the program were included in the study. How teachers perceive the effects of the grouping arrangement on the basis of their own teaching experience and their students' performance is also examined. The key findings of this study can be summarized as follows:

1. Research findings indicate that the majority of surveyed students hold positive attitudes toward ability-grouped class assignment. A strong majority of all the subjects agree that: (1) ability grouping is beneficial to their English learning and

helps them build more confidence; (2) teachers' teaching materials and instructional methods better match their ability levels; (3) teachers' instructional methods help them become more interested in learning; (4) ability grouping benefits both their listening ability and reading comprehension ability; and (5) they are appropriately placed into the appropriate levels of listening classes and reading classes.

2. It's noteworthy that about one third of the subjects perceive ability grouping negatively in the following situations: (1) near one third of all the subjects agree that ability grouping causes more anxiety, (2) about one third of the subjects, either freshmen or sophomores, do not agree that the teaching materials and methodology used in homogenously grouped classes help increase their interest in learning English, (3) more than one third of the sophomores oppose the view that ability grouping helps them feel less pressure of learning English and increase academic motivation, and (4) about 30% of the sophomores do not consider themselves to have been placed in the appropriate levels of either listening classes or reading classes.

3. The majority of the teachers show preference for the grouping plan. As high as 97% of the teachers agree that ability grouping is beneficial to students' learning of English as a foreign language. A very high percentage, more than 90%, of the teachers also shows varying degrees of favorable attitudes toward the grouping practice in the following perspectives: (1) teachers' instructional methods used in homogeneously grouped classes are better suited for the students' proficiency levels and more helpful for increasing students' interest in learning, (2) ability grouping helps students feel less negative pressure and anxiety about learning, (3) ability grouping helps students build more confidence in learning, and (4) ability grouping helps the enhancement of students' listening ability. A comparatively lower percentage, 82.4%, of the teachers agrees that ability grouping helps elevate students' reading ability.

On the other hand, it is important to note that teachers seem to have more concern about the grouping plan in terms of: (1) whether ability grouping helps increase students' learning motivation, (2) whether the teaching materials used in grouped classes help students become more interested in learning, and (3) whether students are placed into the appropriate levels of classes based on their listening and reading ability. Although only less than 30% of the teachers show negative perceptions of ability grouping in these aspects, more careful examination of the effectiveness of the teaching materials, curriculum, and the grouping criteria is suggested in the future.

4. When questioned if the key to further improvement in English is students' own learning attitudes or learning strategies rather than ability grouping, the

overwhelming majority of students and teachers agree with the statement. For example, 92.7% of the 245 freshmen agree that one's own attitudes toward learning are more important than the grouping arrangement to accelerate one's academic performance.

5. About 70% of the students and 90% of the teachers agree that achievement level should be reassessed every year. The findings support Slavin's (1988) conclusion that any type of grouping plan should allow for frequent reevaluation of students' academic progress.

6. The interaction effect between level and timing is found non-significant for all the items. The timing effect is only significant for four questions pertaining to the overall beneficial effects of ability grouping for English learning. Whenever the timing effect is significant, students in the second-year English program hold less positive attitudes towards the effects of the homogeneous grouping arrangement than those taking the first-year program. It remains to be investigated whether student support declines over time because of disappointment with the effects of ability grouping on improving their English proficiency or because of other causes.

7. Level effect is found significant for 10 out of the 18 questions. Whenever there is a significant level effect, the highest group mean is obtained by the low-achievement level. The advanced level has the lowest group mean. Post hoc test results show that the elementary and advanced levels are never in the homogeneous subsets. Students placed in the lower-ability level have the most positive perceptions of ability grouping with regard to questions about whether: (1) ability grouping helps ease the negative pressure of learning English, helps them build more confidence in learning, and improves their learning motivation, (2) the teaching materials and instructional methods used in grouped classes better match their ability levels and increase their interest in learning English, and (3) ability grouping is beneficial to their reading comprehension ability. To the contrary, the students in high-achieving group hold the lowest positive attitudes toward homogeneous placement.

Opponents of grouping are particularly concerned for its labeling and harmful effects on low achievers. They argue that the low-performing students may receive a lower quality of instruction than those in other groups. These students may also suffer from decreases in self-esteem and learning motivation. Apparently, these problems are not the major concerns for the low achievers in the present study. The findings are consistent with Yu's (1994) conclusion that groups with low performance evidently show stronger support for the ability grouped class assignment than the other groups.

Results of post hoc multiple comparisons show that students in the higher-ability group have more reservations about the grouping arrangement than those in the other groups when asked if the practice helps them feel less pressured and more confident to learn. Kulik (1992) noticed that when highly able students are grouped with similar peers, they may become less satisfied with themselves and experience a slight decline in the perception of their ability and self-confidence. High achievers' academic self-concept is likely to decrease due to higher expectations from their teachers and more competition from other high-achieving students. All these may explain why the students grouped in the higher-ability level in the present study feel more pressure than those at the other levels. Although the grouping effects on self-esteem may be negative for high achievers and positive for low achievers, researchers noticed that all the effects are very slight (Kulik, 1992; Rogers, 1993; Rogers, 2002). The findings of this study indicate that, overall, students in the higher-ability stream perceive the grouping effects positively rather than negatively.

The findings also suggest that more high achievers than students in the other groups disagree that the teaching materials used in grouped classes are helpful in terms of increasing their learning interest. Kulik and Kulik (1982) maintained that grouping effects on achievement are only positive for high ability students when they receive "enriched instruction." Kulik (1993) claimed that the enriched classes for these high achievers should provide a special curriculum in which a great deal of adjustment is made. In fact, a special curriculum that is adapted to the level of the students is crucial to student learning not only for high achievers, but also for students of all levels. It is important that the curricular and instructional needs of the learners are taken into careful consideration. Most teachers are in favor of the ability grouping practice because homogeneous classes are easier to manage. This kind of arrangement allows teachers to vary the method and content of instruction to more efficiently handle the diversity of student abilities. With more careful planning, the ability grouping practice can be a very effective way of controlling ability differences and fostering students' learning interest. The goal of grouping is certainly to promote quality instruction for students of varying ability levels and help them develop more positive attitudes about learning and themselves, which hopefully will lead to improved student achievement. More studies in the future should be carried out to examine whether students in grouped classes receive effective instruction in well-modified and differentiated curricula.

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Appendix A

Percentages and Chi-square Values of Junior and Senior Students' Responses to Questions about Ability Grouping

Item	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree	X^2 *
Q1.	2.2	8.9	8.9	35.6	37.8	6.7	66.533
Q2.	3.3	10.0	12.2	40.0	25.6	8.9	50.000
Q3.	2.2	10.0	14.4	32.2	34.4	6.7	49.467
Q4.	2.2	4.4	18.9	37.8	30.0	6.7	58.667
Q5.	4.4	4.4	10.0	33.3	37.8	10.0	60.000
Q6.	4.4	7.8	17.8	33.3	32.2	4.4	48.533
Q7.	3.3	4.4	10.0	37.8	42.2	2.2	90.667
Q8.	2.2	10.0	10.0	43.3	30.0	4.4	72.133
Q9.	0.0	0.0	6.7	22.2	37.8	33.3	20.756
Q10.	0.0	1.1	5.6	31.1	40.0	22.2	49.222
Q11.	0.0	5.6	20.0	26.7	26.7	21.1	13.444
Q12.	5.6	18.9	38.9	21.1	12.2	3.3	45.333
Q13.	3.3	3.3	11.1	41.1	36.7	4.4	82.800
Q14.	3.3	3.3	12.2	41.1	33.3	6.7	72.933
Q15.	4.4	6.7	14.4	20.0	26.7	7.8	52.800
Q16.	3.3	6.7	16.7	41.1	24.4	7.8	54.800
Q17.	6.7	8.9	14.4	34.4	22.2	13.3	28.267
Q18.	5.6	8.9	26.7	28.9	21.1	8.9	27.733

* All the chi-square tests are significant at the 0.01 level.

Note: These students had been placed in both mix-ability and homogeneous classes.

Appendix B

Means of Students' Response Scores Organized into Two Years and Four Ability Levels

Item / Year	Level I	II	III	IV	Total
Q1. Year 1	4.31	4.37	4.38	4.15	4.30
Year 2	4.21	4.15	4.20	3.87	4.11
Total	4.26	4.26	4.29	4.01	4.20
Q2. Year 1	4.59	4.07	3.87	3.59	4.04
Year 2	4.60	3.95	3.63	3.22	3.85
Total	4.60	4.01	3.75	3.40	3.94
Q3. Year 1	4.41	4.05	4.05	3.74	4.07
Year 2	4.35	4.10	3.90	3.58	3.98
Total	4.38	4.07	3.97	3.66	4.02
Q4. Year 1	4.00	3.98	4.07	3.80	3.96
Year 2	4.15	3.61	3.86	3.50	3.78
Total	4.07	3.79	3.97	3.65	3.87
Q5. Year 1	4.16	4.08	3.92	3.84	4.00
Year 2	4.31	3.97	4.07	3.37	3.92
Total	4.23	4.02	3.99	3.60	3.96
Q6. Year 1	4.03	3.76	3.70	3.33	3.71
Year 2	4.18	3.82	3.66	3.17	3.70
Total	4.10	3.79	3.68	3.25	3.71
Q7. Year 1	4.30	4.19	4.10	3.75	4.09
Year 2	4.34	3.89	3.95	3.53	3.92
Total	4.32	4.03	4.02	3.64	4.00
Q8. Year 1	4.11	4.02	3.87	3.54	3.89
Year 2	4.06	3.76	3.69	3.45	3.74
Total	4.09	3.88	3.78	3.50	3.81
Q9. Year 1	2.36	1.98	1.93	2.07	2.09
Year 2	2.55	2.06	1.92	1.89	2.11
Total	2.45	2.02	1.92	1.98	2.10
Q10. Year 1	2.41	2.15	2.10	2.11	2.20
Year 2	2.79	2.26	2.24	2.20	2.37

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Total	2.60	2.21	2.17	2.16	2.28
Q11. Year 1	2.97	3.03	2.95	2.97	2.98
Year 2	3.24	2.87	2.88	2.72	2.93
Total	3.10	2.95	2.92	2.84	2.95
Q12. Year 1	3.92	4.07	4.25	3.79	4.00
Year 2	4.00	4.00	3.83	4.00	3.96
Total	3.96	4.03	4.04	3.90	3.98
Q13. Year 1	4.27	4.25	4.18	3.97	4.17
Year 2	4.00	3.92	3.90	3.78	3.90
Total	4.13	4.08	4.04	3.87	4.03
Q14. Year 1	4.25	4.10	4.15	3.87	4.09
Year 2	4.02	3.84	4.08	3.70	3.91
Total	4.13	3.97	4.12	3.78	4.00
Q15. Year 1	4.11	3.92	3.97	4.07	4.02
Year 2	4.03	3.84	3.78	3.80	3.86
Total	4.07	3.88	3.87	3.93	3.94
Q16. Year 1	4.17	3.80	3.98	4.11	4.02
Year 2	3.97	3.74	3.81	3.91	3.86
Total	4.07	3.77	3.90	4.01	3.94
Q17. Year 1	3.89	4.32	3.75	3.97	3.98
Year 2	3.81	4.13	4.07	4.27	4.07
Total	3.85	4.22	3.91	4.12	4.02
Q18. Year 1	3.92	3.68	3.84	3.43	3.72
Year 2	3.61	3.58	3.27	3.31	3.45
Total	3.77	3.63	3.56	3.37	3.58

Note: Level I, II, III, IV respectively denote basic, intermediate, high-intermediate, and advanced level.

Appendix C

Translated Version of the Questionnaire

1. Ability grouping is beneficial to my English learning.
2. Ability grouping helps me feel less pressure to learn English.
3. Ability grouping helps me build more confidence in learning English.
4. Ability grouping helps increase my motivation in learning English.
5. After I have been grouped by ability, the teaching materials used are more suitable for me.
6. After I have been grouped by ability, the teaching materials used help me become more interested in learning.
7. After I have been grouped by ability, teachers' instructional methods are more suitable for me.
8. After I have been grouped by ability, teachers' instructional methods help me become more interested in learning.
9. The key to further improvement in English is my learning attitudes, not ability grouping.
10. The key to further improvement in English is my learning strategies, not ability grouping.
11. The key to further improvement in English is teachers' instructional methods, not ability grouping.
12. Ability grouping causes me more anxiety over learning English.
13. Ability grouping benefits my English listening ability.
14. Ability grouping benefits my English reading comprehension ability.
15. I feel I am appropriately placed in the group that matches my English listening ability level.
16. I feel I am appropriately placed in the group that matches my English reading ability level.
17. I agree that students' achievement level should be reassessed and students should be regrouped every year.
18. Ability grouping does not have any impact on the improvement of my English ability.

實施能力分班對大學生英文學習的影響分析

劉慧如*

摘 要

本研究的興趣在分析大學生與英文教師對能力分班的態度，希望能更深入瞭解能力分班對學生學習外語的影響。本研究使用統計方法來研討下列三個問題：(1)針對不同問題，學生對於實施英文能力分班的態度為何？(2)學生們對於能力分班的態度是否會因不同的能力等級與年級而有顯著差異？(3)英文教師對實施能力分班所持的態度是正面或是負面？研究樣本包括 582 位大葉大學的學生及 34 位英文老師。這些學生依不同英語能力被編入四個等級的班級，施測當時，他們或者即將完成第一年的英文必修課程，或者是第二年的英文必修課程。研究結果顯示大多數的學生與老師都明顯支持能力分班政策，能力等級與年級並無顯著的交互作用。但要注意的是，針對不同問題，每當年級存在有顯著效果，完成兩年英文課程的學生對能力分班的支持低於只完成第一年課程的學生，而當能力等級有顯著的效果時，初級班的學生比高級班的學生更強烈支持能力分班。

關鍵詞：能力分班、能力分級、學習動機

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