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A Computer-Based Model for Assessing English Writing Skills for Vietnamese EFL Learners

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Abstract

This study aims to investigate the computerized assessment of English learners' writing ability in the writing tests in view of the use of computer-assisted language learning (CALL) for Vietnamese learners of English as a foreign language (Vietnamese EFL learners) in Vietnam. It explores the possibility of using computers to assess learners' writing abilities to prepare language learners for the standardized tests through the analysis of data from the posttests and the theoretical interpretation of second language acquisition (SLA). The focus of the study was on a survey of intermediate level students of English taking writing posttests at a Vietnamese university. The writing tests were collected, scored and categorized into five-point levels. The results of the study showed the statistical significance for the writing tests ($p < 0.05$). The effective implementation of a scoring model was suggested to assess students' writing performance and may provide the foundation for further research in the computerized assessment in semantic aspects to design and implement innovative technology-mediated tasks for assessing academic English proficiency.

Keywords: computerized assessment, language conventions, model, posttests, standardized tests, subjective and objective tests

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1. Introduction

The comprehensive knowledge of English has become the key to being successful in finding good careers since the use of English has expanded into many areas. A good command of English requires a great deal of effort in learning and an effective assessment of students' levels. An investigation into the possibility of integrating computer-assisted language learning (CALL) into the assessment of learners of English, upon their completion of English language courses, suggests that language instructors should take into consideration a fair way to assess them. In addition, this summative assessment will help language instructors to judge the success of their teaching and will help English language learners identify areas to improve their writing skills.

In this article, the author suggests a model for a computerized assessment of English writing tests after investigating the Vietnamese (L1) students' English (L2) performance at a Vietnamese university. There has been significant research on the application of CALL and the linguistic theories regarding SLA to determine how to assess students' performance (Chapelle & Douglas, 2006); however, there is still the need to draw up models that are consistent with the computer processing abilities. This study aims at exploiting the theory of SLA by interpreting the linguistic concepts of Halliday (1985), Martin (1992) and Eggins (1993) in relevance to the use of CALL. In this study, language conventions (i.e. topic addressing, organization, coherence and language use) are mentioned with a reference to the benchmark scale of the Educational Testing Service (ETS) as the foundation on which a computerized assessment of English learners' writing abilities is developed. This investigation is merited for two reasons: 1) the students' writing performance should show a relationship between the writing posttest and the application of CALL in English courses; 2) if such a relationship exists, it may be possible to deploy a computerized assessment for writing abilities. This study will lead to forming an objective computerized scoring method, which does not involve the participation of many scorers, especially when the individual human factor is always subjective.

2. Literature Review

The literature review in this study analyzes some investigations of computer software programs and the relationship between the issues of CALL and SLA theory. This article discussed written discourse that includes aspects of language development (Richards, Platt &

Platt, 1999) regarding Vietnamese EFL learners' writing skills with technological support. From this theoretical background and the survey of intermediate level students of English taking writing posttests at the end of a language course, a model was built to assess students' writing performance in order to prepare them for the standardized tests such as TOEFL iBT. The model in this study was the comparison between the sample dataset and students' writings after the analysis of software programs and the explanation of language theories. This could contribute to transferring the manual scoring to automatic scoring with the higher accuracy. This high accuracy was enhanced based on the improvement in the comparison of the documents not only in structure and vocabulary but also in the whole document layout. In addition, this model may help learners raise their test scores in standardized tests.

The connections between CALL and SLA in Jung's (2003) were relevant to three perspectives: (1) learners' acquisition, (2) outcome, and (3) interaction. These connections are strengthened by Chapelle (2009) who discussed the multiple theoretical perspectives related to language use in social contexts and the development and evaluation of CALL materials and tasks. Accordingly, theory and practice in L2 learning can be matched together by the use of modern technology. In addition, the development of technology has led to the indispensable incorporation of this medium into the instruction process. The computer has become an integral part of the learning activity, through which learners can learn language skills (Nomass, 2013, p. 111).

The philosophy of CALL puts a strong emphasis on student-centered lessons that allow the learners to learn on their own using structured or unstructured interactive lessons. Computer and its attached language learning programs can give L2 learners more independence from classrooms and allow language learners to have the option to work on their learning material at any time of the day. It can be said that multimedia are resources that make the most effective use of computer technology by providing simulations, multiple representations, and informative and immediate feedback to learner's actions at the interface (Gilakjani, Ismail, & Ahmadi, 2011).

Science and technology now play an important and active role in the teaching and learning of a language, and several software programs have been designed to assist teachers and learners in acquiring a good command of English, but there is no specific evidence of positive or negative reasons in the pedagogical use of technology. As for the negative aspects, the use of machine scoring systems to read and evaluate students' writing has raised concerns in parents, teachers, school administrators, and students as whether these systems can meet the learning outcomes (Sweeney et al., 2010). The studies reviewed by Chen and Cheng (2008)

have showed that the validity of the automated writing evaluation (AWE), also referred to as automated essay scoring (AES) system, has not been thoroughly ascertained. The ability of AES to improve students' writing significantly in either form or meaning is still limited. The concerns also reflect the computer ability in terms of limiting students' writing ability to features recognizable in their writing and compelling teachers to teach what the least important things are, gauging the development of ideas by counting the number of words and the length of essays. Moreover, research by Perelman (2012, pp. 121-150) and Vojak, Kline, Cope, McCarthy and Kalantzis (2011, pp. 97-111) explained that AES limits the creativity and assesses only surface features of writing such as grammar, spelling, and punctuation (as cited in National Council of Teachers of English, 2013). With AES, humans have to be trained to score like computers and students become dependable on machine-tricking strategies. Furthermore, AES may be against students who are not much familiar with technology (National Council of Teachers of English, 2013).

However, AES can be used as a positive supplement in writing classes in different learning contexts. The study by Li, Link, Ma, Yang, and Hegelheimer (2014) showed the usefulness of AES holistic scores for classroom purposes, and also showed that instructors used Criterion scores (by ETS) strategically to gauge language students' writing needs. Choi (2010), in the research on the impact of AES on improving English language learners' essay writing, indicated that AES could effectively assist students in writing when it was integrated with a writing instruction as a formative assessment tool. Lu (2012) proposed a framework to the validation of all AES systems when the author mentioned the validity of scores produced by the Intelligent Essay Assessor (IEA) for the writing tasks from the Pearson Test of English (PTE) Academic, in which the framework could facilitate the systematic collection and examination of empirical evidence and the theoretical rationale. Lu also suggested that the further studies should develop a larger and more sophisticated array of linguistic and rhetorical features.

Though they seem to be positive in some aspects, tools to review SLA through computer technology still do not meet the requirements of the standards of educational software for written communication such as assessing writing tests (Chapelle & Douglas, 2006). In view of teaching and learning language on the computer, the natural language processing on computers is going through some critical issues, one of which is the appropriate and objective assessment of students' language performance. Pilliner (1968, pp. 16-35) stated that subjective tests were different from objective tests with regard to scoring procedures (as cited in Bachman, 1997). Writing tests that involved the use of rating scales should be subjectively

scored since it was difficult to evaluate writing tests objectively in the scoring procedure, and standardized tests may consist of both objective and subjective factors. Moreover, the score on a given test which is considered as an indicator of students' language ability must be reliable and valid (Bachman, 1997).

As far as the theory of SLA is concerned, Hubbard (2006, p. 5) proposed the development of CALL software in teaching and learning languages from the theory in instructed SLA. Eggins (1993), in her research, following the studies by Halliday (1985) and Martin (1992), worked out a theoretical linguistic model that can be referred to in constructing an assessment model through the clarification of some conceptualizations in the systemic functional linguistic theory such as cohesion. In this sense, cohesion refers to how the bits of the discourse are bound together to create coherence in forming a text which is not a collection of clauses, but a unit of discourse patterns of cohesion (lexical relations, syntactical structures, references and conjunctions) and a unit of semantic patterns ("experiential" showing actions, "interpersonal" expressing attitudes and "textual" incorporating contexts). The outcome measures, therefore, are based on the analysis of texts at the lexico-grammar level and discourse-semantics (Cao, 2004).

As for computerized assessment, according to Attali and Burstein (2005, pp. 2-4), the new version e-rater v.2.0 was developed with twelve features: four features in identifying errors in grammar, usage, mechanics, and style, two features in organization and development, three features in lexical complexity, two features in pro-specific vocabulary usage, and one feature in essay length. However, Attali and Burstein (2005, p. 20) stated that e-rater v.2.0 still needed to be improved in three ways: (1) supplying more different writing aspects through the theories of writing, (2) modifying the model process, and (3) identifying different kinds of essays.

This study considered language structures in lexical-grammatical aspects, and two dimensions of an essay, which are coherence and cohesion and the identification of different essays. Consequently, this study suggested the building of a model to support examiners in scoring writing tests and to help improve Vietnamese EFL students' writing skills to prepare for the taking of standardized tests such as TOEFL iBT.

From the perspectives of the CALL and the SLA issues, this study addresses the following research questions:

1. What are the effects of the scoring standards in rating Vietnamese EFL learners' writing ability in their second language acquisition?

2. What is a suitable computer-based model, based on this investigation, to assess Vietnamese EFL learners' writing skills to prepare for standardized tests?

3. Method

This study was conducted to primarily investigate a relationship between the posttest (scored in accordance with ETS rubrics) and the application of CALL in the English courses together with the theories of writing, and then suggested a computer-based model for writing skill assessment. All the research questions were addressed by quantitative data. Before carrying out the research, the researcher, instructors, and administrative staff met to discuss the intervention and data collection. All students received treatment. Before and after the research intervention, all students had pretests and posttests, which were essay-writing tasks. The tests were administered by the researcher and the instructor of each class to control the testing conditions between classes. The investigation involved test-takers and a posttest,

3.1. Participants

The population that was accessible to this study consisted of students at intermediate English level taking posttests. Because of the large number of students who take the test every month (i.e. approximately 200) and the test satisfying the subjective and objective requirements of the testing philosophy, a simple random sample of 50% was chosen for inclusion in this study. This resulted in a sample size of 500 participants. While the study sample could not be considered representative of all students, the major purpose of this study was to determine whether a prototype could work in an accessible context, based on the mentioned language conventions similar to those set by ETS.

3.2. Measures

The measures used in this study were posttests since pretests were the entry tests in which students were required to get the score of the pre-intermediate level to get into the intermediate level according to the scoring standards. The posttests which were the two kinds of writing tests (integrated and independent) were aligned within a single theme or content area, reflecting how students naturally acquired and used the language in the classroom or in the real world. Each item provided the information and elicited the linguistic interaction that was necessary for students to complete the subsequent item. In the integrated task, students were required to perform three skills (reading a passage, listening to a lecture, and then writing a response). In the independent task, students were asked to write a response in the form of an essay on a given topic. All the writing tasks were administered similarly to

the Internet-based writing tests. Ratings were given on a 0-to-5 response scale where 0 meant “rejecting the topic” and 5 meant “effectively addressing the task”.

3.3. Data Collection Procedures

All the participants took the computer-based exams. On the computer screens appeared a user-friendly interface, which was a two-way communicative dialog box. The participants gave an integrated writing response in the allotted time of 25 minutes. After they finished the integrated part, they went on to implement an independent task for 30 minutes. In this section, the dialog box showed an essay topic only for the participants to give responses. The responses were printed out and scored by language instructors with a reference to the five-point rating rubrics designed by ETS (2005a). To prevent raters’ bias based on the mode of responses, raters independently scored answer items for each student. As part of an overall strategy to summarize results on all items in terms of meeting the passing-failing requirement of the author’s university, the ratings were converted to a scaled score of 0-30 in reference to converted score by ETS (2005a). The two raters’ converted scores were then compared. If the discrepancies were not significant, the raters reevaluated responses and reached a consensus on a score. However, the agreement between human raters may be lower than desired, and agreement between human scorers, thus, may not always be accomplished sufficiently (Sweeney et al., 2010).

3.4. Research Design

A posttest-randomized design was used in this study. The major data in this study included 1,000 manually scored writings (i.e. 500 integrated and 500 independent writing responses). To ensure the objectivity of the survey, the scored writings were chosen randomly. All the test results dealt with are within the jurisdiction of the university and the consent was obtained from the university authorities. To ensure the confidentiality, candidates’ names were removed prior to the data entry; the raters’ names were not revealed; and the permission of the school authorities was acquired. Therefore, the test scores were affected by such factors as communicative language ability, test method facets, personal attributes, and random factors (Bachman, 1997). The scored writing responses were classified according to the points earned after a survey of errors made in the scored writings against language conventions. After the collected data were analyzed, the construction of a computerized scoring model was suggested.

In this posttest design, the two types of writing responses received a *p* value that emphasized the probability of facts. All the participants taking the writing tests (posttests) were measured after the intake. The randomized experimental design ensured the internal

validity. The p value should show a statistical significance for the tests and the test-takers. In this study, the scores earned by the test-takers were assessed through a one-sample t test, and the percentage of the test-takers was assessed through the one sample t test.

3.5. Reliability and Validity

The author analyzed the participants' writings and compared the scores of both integrated and independent writings. Reliability was assessed when the raters made judgments on the language produced by the test-takers. The inter-rater reliability was estimated when the scores were produced by two raters and a correlation coefficient was calculated between them (Brown, 1995). The objectivity was ensured since all the test-takers sat the tests of the same format at different times and the tests were collected randomly, and there was a causal relationship between student performance and writing instructions, so internal validity was ensured.

4. Results

The results are discussed in terms of the components of the scored writings, the linguistic characteristics of which are lexico-grammar and coherence, to see that the participants' awareness of CALL and linguistic features and the posttest results were related. The writings were divided into levels corresponding to the criteria similar to those of ETS (2005b). Potential difficulties were that the test results might get involved with subjective factors due to the unavoidable elements of human intervention, so the survey results might create variables.

The first research question concerns the effects of the scoring standards in rating learners' writing ability in terms of test scores earned for integrated and independent responses. All the respondents gave responses to the questions on various topics in the test, and all the questions were answered in the same format. For integrated responses, test scores were found to range from 3.0 to 3.5, for topic addressing (3.5), organization (3.5), coherence (3.0) and language use (3.0). For independent responses, the test scores were found to range from 2.5 to 4.0, for topic addressing (4.0), organization (3.5), coherence (2.5) and language use (2.5). The statistics are displayed in Table 1.

Table 1

Test scores in integrated and independent writing responses

	Integrated responses	Independent responses
Addressing topic	3.5	4.0

Organization	3.5	3.5
Coherence	3.0	2.5
Language use	3.0	2.5

For the mode of delivery of the posttest, a one sample t test showed that the differences in response scores between integrated writing responses ($N = 500$, $M = 3.250$, $SD = 0.790600$) and the independent writing responses ($N = 500$, $M = 3.125$, $SD = 1.687400$) were statistically significant, $t(3) = 8.2216$, $p = 0.0038$, and $t(3) = 3.7039$, $p = 0.0342$, respectively. The statistics are clearly presented in Table 2.

Table 2

Comparison between integrated and independent responses

Mode of delivery	Mean	SD	df	t-value	p
Integrated responses	3.250	0.790600	3	8.2216	0.0038
Independent responses	3.125	1.687400	3	3.7039	0.0342

The second research question is answered based on the survey of the tests performed by the test takers to show how students' linguistic competence in writing was acquired in terms of the percentage of respondents acquiring test criteria in giving integrated and independent writing responses. For integrated responses, 70.2% ($N=351$) of the respondents were found to address the topics (earning 3.5 points). 60.4% ($N=302$) of the respondents could arrange the essays in good organization (earning 3.5 points). 40.6% ($N=203$) of the respondents could write coherently (earning 3.0 points). 41.6% ($N=208$) of the respondents could acquire the language use (earning 3.0 points). Similarly, for independent responses, 74.2% ($N=371$) of the respondents were found to address the topics (earning 4.0 points). 40.4% ($N=202$) of the respondents could arrange the essays in good organization (earning 3.5 points). 45.8% ($N=229$) of the respondents could write coherently (earning 2.5 points). 56.8% ($N=284$) of the respondents could acquire the language use (earning 2.5 points). The statistics of the survey are clearly presented in Table 3.

Table 3

Percentage of respondents acquiring test criteria

	Percentage of integrated respondents	Percentage of independent respondents
Addressing topic	70.2%	74.2%

Organization	60.4%	40.4%
Coherence	40.6%	45.8%
Language use	41.6%	56.8%

As for the percentage of integrated and independent respondents, a one sample *t* test showed that the difference in response scores between their integrated writing responses ($N = 500$, $M = 53.200$, $SD = 14.539$) and the independent writing responses ($N = 500$, $M = 54.300$, $SD = 14.919$) were statistically significant, $t(3) = 7.3182$, $p = 0.0053$, and $t(3) = 7.2794$, $p = 0.0054$, respectively. The *p* values can calculate the possibilities of the scores being the foundation for future implementation as they are presented in Table 4.

Table 4

Comparison of percentage of integrated and independent respondents

Percentage of respondents	Mean	SD	df	<i>t</i> -value	<i>p</i>
Integrated responses	53.200	14.539	3	7.3182	0.0053
Independent responses	54.300	14.919	3	7.2794	0.0054

From Tables 2 and 4, it is clear that the findings indicate that the amount of exposure to a foreign language with the guidance and support in using CALL integrated into the school curriculum has a positive effect on students' performance. Though integrated and independent respondents gave different responses to the questions on various topics at different testing times, the statistics remain significant. It appears that the intensity of using CALL in the total instruction designed in the curriculum leads to a good performance in the tests. Thus, the results support the author's hypothesis about a positive relationship between the application of CALL and Vietnamese EFL learners' language acquisition.

5. Discussion and Implications

This study investigated the effects of the scoring standards in rating the learners' writing ability in relation to CALL and SLA intervention. It also examined whether the percentage of the test-takers could meet the necessary requirements on which an automated, integrated performance assessment would be built for students of intermediate levels of language proficiency with CALL and SLA intervention taken into account. As for the posttest score, the respondents gave responses to the questions of which the scores range from 3.0 to 3.5 for integrated responses, and from 2.5 to 4.0 for independent responses. Though this means that

the respondents' level reaches above the average and satisfies the requirements, the scores earned by respondents in "coherence" are rather low (3.0 for integrated responses and 2.5 for independent responses) as compared with other conventions (addressing topic, organization and language use). The number of respondents writing with coherence was also low (40.6% or 203 respondents for integrated responses, and 45.8% or 229 respondents for independent responses). As for the respondents who acquired test criteria (from 3.0 to 4.0), the percentage of integrated respondents ranges from 41.6% ($N=208$) to 70.2 % ($N=351$), and the percentage of independent respondents ranges from 56.8% ($N=284$) to 74.2 % ($N=371$). This also means that the assessments imposed on language learners reach the accuracy to some extent.

The statistical findings in this study indicate that there is no significant difference and that there is a statistical significance for the two kinds of writing tasks with the t values and p values for integrated responses (8.2216 and 0.0038), and independent responses (3.7039 and 0.0342) respectively. In the same way, there is a statistical significance for the proportion of test-takers assessed with the t values and p values for doing integrated responses (7.3182 and 0.0053) and independent responses (7.2794 and 0.0054) respectively. The slight differences in Vietnamese EFL learners' achievement of both integrated and independent tasks when compared under investigation seem to indicate a good match between the writing posttests and the amount of knowledge learned in the courses. Students in intermediate courses appear to have learned enough in those courses to make up the numbers of scores that reflect the relationship between the obtainment of the language conventions like those set by the ETS. This observation helps to ensure that the students merit their testing scores. In fact, this match may be widespread at institutions that incorporate computer technology into language learning.

The reason for the students to have been able to finish the writing tests positively may be that they had been given clear and systematic instructions of CALL and linguistic knowledge in advance of how to take the tests, and they had spent an adequate amount of time familiarizing themselves with their work on the computer. The competence and experience of the students in specific assignments may have contributed to their outcomes. The flexible integration of both computer and humans (teacher and student) can increase learners' autonomy and raise their awareness of writing conventions by working with the software independently. Moreover, this can help to enhance the cooperation between instructors and raters, especially in team-teaching.

Although AES has indicated a number of limitations in the design, such as the partial evaluation of some certain lexical and grammatical aspects and the lack of recognizing

incoherent and illogical writing (Chen & Cheng, 2008, p. 107), this study showed that students' positive perception of effective facilitation of CALL is realized. Their in-class knowledge of language conventions can help them write with cohesion to some extent. Therefore, it can be said that the integration of computerized assessment brings about some advantages that language teachers and learners can benefit. Accordingly, language teachers can give impartial feedback to students after the tests and language students can be assured of their performance in the tests as this can increase their self-confidence in writing. In spite of the fact that computer-generated feedback was considered to provide only formulaic and generic information that can hardly solve students' individual writing problems (Chen & Cheng, 2008, p. 107), the prior teaching of language conventions together with the awareness of CALL may drive away this phobia.

Some AES programs that are said to improve students' writing through a continuous, iterative process of writing and revising, only define writing as formulaic and by social endeavors (Rothermel, 2006, as cited in Chen & Cheng, 2008), these programs, however, will benefit students in effective written communication if they are used properly. This study was limited to the investigation of the intermediate level students who learned basic writing micro-skills such as writing sentences and paragraphs, and are aware of how to write an essay to meet certain requirements of writing. The research tried to meet part of these requirements by visualizing an automated assessment that can give a fair assessment of students' performance without human subjective involvement in grading tests. The assessment may not be a good choice for those students who want to communicate thought in a creative and original way (Chen & Cheng, 2008), but it has created a foundation for further studies.

In this study, language instructors and test raters were different. The former attempted to make students aware of the use of language and CALL, and the latter tried to assess whether students had met the requirements through their writings and to give methodological and content feedback to the teacher in charge. As technologies may be changing the way students write and the way teachers assess writing, it is encouraging that computerized assessments should be used because writing assessment technologies enable instructors and students to succeed in getting authentic writing contexts for teaching and learning (Neal, 2011, p. 12). It is possible to capture more of the different writing aspects through the theories of writing (Attali & Burstein, 2005). Accordingly, the concepts initiated by Halliday (1985), Martin (1992) and Eggins (1994) indicated that the meaning of essays could be expressed using cohesive devices as part of language conventions.

The significant difference between the two kinds of scores of integrated and independent tasks means that the scoring model can be set up. The model (Table 5) is in the form of a tool parser that processes the language input in the order of (1) Input of the word document, (2) Analysis of the document, (3) Scoring process, (4) Result (Scores). The tentative scoring system accordingly analyzes and reviews the tasks by considering the entire segment in the texts and matches them with the criteria. More specifically, after the test-takers have completed both the writing tasks, the computer software processes lexical and syntactical errors along with the style, format and meshes them with the programmed content, calculates according to the scoring standards similar to those of ETS, and then notifies the candidates of the scores right on their computers.

Table 5

The model for computer-assisted scoring system

INPUT OF THE WORD DOCUMENT (1)	ANALYSIS OF THE DOCUMENT (2)	SCORING PROCESS (3)	SCORES (4)
Writing tasks (integrated or independent)	Checking errors against language conventions	Scoring: comparing tasks and sample dataset based on structure and vocabulary and identification of different essays	Providing converted scaled scores

The proposed model, which is standards-based, performance-based, developmental in nature, and integrative, should be used in accordance with the scoring rubrics that rate language learners' performance in terms of whether it would meet the expectations, exceed the expectations, or not meet the expectations for the tasks. Therefore, it can be said that the performance assessment is reliable and valid. This prototype is a comprehensive performance assessment for assessing the progress that language learners are making in preparation taking standardized tests such as TOEFL iBT as well as in developing their language proficiency.

6. Conclusion

The study contributes to not only the construction of a model to support the processes of identifying language errors which have an impact on the course outcomes, but also the provision of necessary feedback to work out the appropriate methods to improve Vietnamese EFL learners' weaknesses in writing to prepare for standardized tests. The proposed model can allow users with little knowledge of information technology to access the process of

information. The model is user-friendly, which means it is a highly communicative interface network between the tool and the user.

The investigation of this study ascertains students' beliefs that they are competent to use computers in their choice of taking writing tests on the computer. Computer self-efficacy can exert a significant influence on students' expectations of the CALL outcomes and their emotional reactions to actual computer use (Compeau & Higgins, 1995). The existence of such a reliable and valid measure of self-efficacy has implications for teaching and learning languages in making it possible to give students a fair assessment. The deployment of language conventions in this study can help improve language learners' performance from basic interpersonal communicative skills to the level of context-reduced of academic language with the help of technological advances, and help maintain the linguistic knowledge that Vietnamese EFL learners can acquire and use in all modes of communication via computers.

Although the proposed model can carry out the assessment of productive language skills, it is cannot completely replace human raters. The model for writing test automated scoring is supposed to be an open source so that language instructors can adjust their criteria to be suitable for specific requirements. The study may serve to exemplify how research and practice can be more closely arranged, and how standards-based classroom instruction and computer-assisted assessment practices can meet to form a seamless connection. The model suggested in this article can help language teachers to overcome the time-consuming tasks of scoring and to achieve a fair assessment of learners' writing ability. The further research could use this research as the basis to improve the implementation of this model in the direction of processing the contextual semantics of the writings for academic English proficiency.

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The Attitude of Hotel Department Students towards Learning English in Relation to their Learning Strategies and Achievement in Indonesian Context

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Abstract

English is taught as a compulsory subject at vocational high schools' curriculum in Indonesia. One of the departments available at the vocational is Hotel Department. The alumni are prepared to have good English communication skills to support them to get better job in the future. In the realm of EFL teaching at vocational senior high school level, students' attitude toward English seems to be neglected by both educators and researchers. However, based on individual differences theory, students' attitude towards learning English and learning strategies are among the determinant factors in their success. This mix-method design study was an attempt to investigate students' attitude towards learning English, learning strategies, and their relation between language learning strategies and achievement.

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The research participants were forty four students of a vocational high school in South Sulawesi which is very close to Tana Toraja, an important tourism destination in Indonesia. The data were collected using attitude scale, strategy inventory for language learning, and semi-structured interview. To address the research questions, quantitative data were first tabulated and classified according to the given score ranges, then categorized in regard to the given criteria. The qualitative data from semi-structured interviews were used to support the quantitative data. The result of both quantitative and qualitative data analysis revealed that the students had positive attitude towards learning English, the dominant language learning strategies that the students used was metacognitive strategy, and there was no relation between the students' language learning strategies and their achievement.

Keywords: Vocational high school, EFL learning attitude, language learning strategies

1. Introduction

In learning English, students are employing language strategies that they use to improve their achievement. The same as the attitude, the strategies are different among students' individually. The students' strategies choice can facilitate them to internalization, storage, retrieval, or use the new language. Oxford (1990) stated that the strategies are tools thereby can be said that learning strategies are important tools in building students ability in communication. This is supported by O'malley and Chamot (1990); Chamot (2004) argued that that learning strategies are the thoughts and behaviors that individuals use to help them comprehend, learn, or retain new information.

It cannot be denied that language learning strategy plays a significant role in foreign language learning. Although learning strategies are used by students themselves, teachers play an important role in helping students develop and use strategies in more effective ways. This is in line with Oxford's (1990) opinion that the teacher is traditionally identified like parents, a director or even judge, but in this case teacher should change the role to be a facilitator, helper, guide, consultant or adviser. In addition, the teacher has to give opportunities to students to choose strategies that best suit their learning objectives.

People could learn effectively by using learning strategy. Especially in vocational high schools that have potential students in work field based on their departments. The advantage of vocational school is the students have basic skill that they need in order to work, thereby after graduating they could make their own job field and employ people or they could work

with other people. That's why they require language skill to communicate with people in order to develop the huge work field.

This research was important to find the students' attitude towards language learning because there is still less information about the students' attitude in learning language especially for Hotel Department students in vocational high school. The teachers need the research result to help them make the suitable or relevant English teaching and learning for Hotel Department. The relevant English learning and teaching will prepare Hotel Department students who are hoped that after graduating from the school, they have special competence to face the real workplace.

The researcher assumed that students' attitude towards learning is the crucial problem nowadays. It is shown that many vocational high school students have unfavorable attitude such as fighting, bullying, or thoughtless about their learning. Therefore this research correlated the students' attitude and the students learning strategies to help the teacher to make a good classroom management based on students' department and help students to reach good achievements.

English is a compulsory subject in vocational high school. Hotel department students of vocational high school have to learn English because they need English for communication in the job. They are prepared to have the huge opportunities after graduating in vocational high school. Therefore, this research was feasible to be conducted in vocational school in order to find out students' attitude towards learning English in relation to their learning strategies and achievement.

2. Literature Review

2.1. Attitude towards Language Learning

Attitude is one of the pivotal factors in foreign language learning. Every student tends to react in response to people or things by positive or negative attitude. If the students have positive attitude, it becomes the good beginning for the learning and teaching process. Student's good or poor attitude makes life easy or difficult in the foreign language classroom (Smith, 1971). Teachers who match their teaching style to students' learning can enhance students' academic achievement and students' positive attitude (Felder & Henriques, 1995). This is meaningful to teacher and learning materials as well as students' positive attitude in language learning.

Positive attitudes towards learning of language can increase motivation of students and they are enormously constructive in language learning (Merisuo-Storm, 2007). The students who suffer from strained learning will not advantage greatly in the language learning (Smith, 1971). Therefore, teachers need to adopt approach activities to avoid embarrassment (Jones, 2011). The more motivating classroom activities in the learning of English as a foreign language are leading to the higher students' motivation and the students' attitude achievement.

Attitude as a set of beliefs strengthened in a specified sociocultural background and reinforced in a particular learning environment. It is widely considered that positive attitude can facilitate learning. A learner who is hesitant or having negative attitude lacks enthusiasm to learn. Students who are enthused and those who are discouraged to learn have different visions on their learning process. A personal perception of the class and the teacher, and curriculum affects attitude of students towards learning. The attitude of teachers plays a significant part in the current context. However, in the certified courses, the role of teachers has been changed from being the controller to the facilitator of the class. The professional teachers accept mistakes of students in the language use as an essential element of learning a language. They facilitate and stimulate students to use language to a greater extent every day. Learning results of students are subjective to their understanding on interpersonal behavior of teachers. If students believe that the teacher associates and empathizes with them, cares for their learning outcome, understands their problems, they act in positive response and play a role to increase their motivation in the classroom.

The role of teachers in the era of paradigm shift has shifted from being a stern authoritarian to a facilitator. The teacher is required to challenge the students to be fearless in doing assignment, especially in learning of English as a Foreign Language. The teacher needs to consider that anxiety could lead students to be demotivated. Obviously, discouragement might drive English learners to be incompetent on English language skills. The teacher should monitor the problem of learners in English language learning and how the problems can be solved. It is also important to consider the relation between grammar mastery and students perception about learning a language. Teachers need to consider some vital aspects, such as what a learner wants, the reason of a student learning English, and students' attitude toward teachers. Students need an inspiring teacher who can inspire them to speak frequently in the classroom and educate them the way of using language outside of classroom. In addition, students need a smart and capable English teacher in correcting their mistakes by keeping respects as well as creating a comfortable atmosphere in classroom.

2.2. Language Learning Strategies

Language learning strategies was introduced worldwide to the literature of second language in 1975 on the good language learner research (Rubin, 1975). Creating successful learners should consider correspondingly the teachers with regard to teaching style and students with regard to learning strategy. Preliminary researches aimed at documenting the good-language-learner strategies. In the 80s, the prominence moved to language-learning strategies classification. In the beginning, strategies were classified based on direct or indirect, and later were divided into cognitive and metacognitive categories (Hosenfeld, O'Malley, & Chamot, 1992). However, the term of language learning strategies refers to the conscious processes and actions deployed by language learners for helping them learn or use more effective language (Rose, 2015). Cohen (2014) defined language learning strategies as thoughts and actions, deliberately preferred and practiced by language learners, assisting them to accomplish numerous tasks from the exceedingly beginning of learning to the mainly complex stages of language performance. In addition, Rose (2015) revealed that the term language learner strategies as incorporating strategies in language learning and language use is occasionally used while both of them are in distracted lines since the use of second language can offer learning opportunities as well.

Oxford (1990) stated that learning strategies are specific actions taken by the learner to make learning easier, faster more enjoyable, more self-directed, more effective, and more transferable to new situations. O'Malley and Chamot (1990) and Chamot (2004) states that learning strategies are the special thought or behaviors that individuals use to help them comprehend, learn, or retain new information. Oxford (1990) classified learning strategies into two categories; they are direct strategies and indirect strategies. Language learning strategies that directly involve the target language are called direct strategies. Indirect strategies support and manage language learning without directly involving the target language. The direct strategies consist of three strategies; they are memory strategies, cognitive strategies, and compensation strategies. Then indirect strategies consist of metacognitive strategies, affective strategies, and social strategies. Furthermore, Oxford (1990) stated that there are some factors that can influence the use of language learning strategies; they are degree of awareness, task requirements, teacher expectations, age, sex, nationality/ethnicity, motivation, and purpose for learning the language.

Lee and Oxford (2008) found that strategy use was strongly attached to strategy awareness and English language learning through self-image. Strategy awareness and English language learning through self-images are measured as metacognition in English language

learning. As a result, the considerable authorities of strategy awareness and English language learning through self-image on strategy use involve the way of teaching English effectively. In this case, teachers are expected to promote and encourage self-image and strategy awareness in teaching students to learn strategies for successful learning.

Zimmerman and Pons (1986), using scheduled interview, found that self-regulated learning develops an assurance for describing the students' learning strategies in natural settings. Resembling every instrument which is not based on a performance and reasoning subsequent self-descriptions requires further validation. It needs to be eventually validated and aligned with actual performance of students on academic assignments in authentic settings. The current results suggest that conceptions theory of students as initiators, planners, and observers their individual instructional practices encompass empirical and practical worth.

2.3. Achievement of Students

The students' achievement is closely related to the academic success (Busato, Prins, Elshout, & Hamaker, 2000; Harris, 1940; Hoy, Tarter, & Hoy, 2006; Zimmerman, 1990). Every student wants to gain the best achievement in learning and teaching process, and on the other hand the teacher wants that students have the best achievement too. Achievement is very important for the students, so the good student will have good preparation for learning. Bouangeune, Sakigawa, and Hirakawa (2008) revealed that numerous inspiring implications in students' achievement for English language teaching in Laos. Laos secondary students experience basic vocabulary problem. Furthermore, vocabulary skills appear to have a considerable consequence on reading comprehension that requires the emphasis on basic vocabulary learning before reading comprehension practice. Additionally, the revision of the textbook content is expected to focus more on basic learning using Lao language, rather than English in instruction or explanation. Students' achievement in grammar are also little influencing the students' achievement in reading comprehension that requires the emphasis on basic grammar before dealing with reading comprehension.

The achievement of English learners is a vital issue since vocational secondary schools concentrate on setting up students to be successful to pass the university entry test and or to be ready to work in a company. It is extensively accepted that the incredible increase of English as a Second Language (ESL) learners in U.S is poorly anticipated (Brisk, 2010). In addition, the increase of ESL students promotes content spot teachers by means of strategies and techniques to formulate reasonable subject matter whilst developing English language

proficiency. However, there is no fact that advanced teaching can be successfully open in enclosure programs that are closely separated with the foremost literacy program.

Enlargement of the school day or year for these students might be one way to fill in the space. Skills of teachers create a huge divergence as well. Learners of English language require teachers who are able to deliver the powerful, open, and encouraging reading instruction revealed to be mainly successful, and these teachers need demanding qualified development. Providing extra time and making certain that every child obtains proficient instruction are luxurious. However students are not able to learn the untaught materials. Converting learners of English language into achievers of good readers entails enlarged resources and dedication that run the schools and they benefit from the payment of the citizens and communities.

In the students' home language, academic teaching is supposed to be the element of the instructive program of English-language learners. The achievement of students in reading skills is more successful in the context of English as native language in the EFL through English immersion program for children. As a matter of fact, evidence proposed that literacy and additional skills shift across languages. It is easier to learn something in native language than in a second language because learners always attempt to recognize the learning materials in the native language. The extra advantage of primary-language instruction in helping to maintain the first language that studies have deeply established is a bilingual education.

3. Method

This research used a mixed-method design in which the quantitative data were collected first and followed by the qualitative data. The research was conducted at a vocational high school in Indonesia. The total number of participants in this research was forty four Hotel Department students. The selected department was Hotel Department because this department used more English than the other departments.

This research used attitude scale, interview, and strategy inventory as instruments. The data collected were analyzed quantitatively and qualitatively as follows.

Table 3.2.
Likert Scale

Positive statement score		Negative statement score
5	Strongly agree	1
4	Agree	2
3	Undecided	3
2	Disagree	4

Categorizing the students' attitude towards learning English in the following:

Table 3.3.
The Rating Score of Attitude classification

Interval Score	Category
63 – 75	Strongly positive
51 – 62	Positive
39 – 50	Neutral
27 – 38	Negative
15 – 26	Strongly negative

In order to show the profile of students' result on the SILL questionnaire, the sum of each students result as shown in the table above, then, was put into the table as following:

Table 3.5.

Profile of Students' SILL Results

STUDENTS	PART A	PART B	PART C	PART D	PART E	PART F	AVERAGE	OVERALL AVERAGE
1								
2								
3								
Etc.								

(Oxford & Burry-Stock, 1995)

After tabulating and analyzing the data from the two data collection instruments, the data analysis were continued to the correlational analysis between the language learning strategies, used by the students, and their English achievement.

4. Results

4.1. Research Questions 1: What is the attitude of Hotel Department students of SMK Negeri 3 Parepare towards learning English? The finding is shown in the following table:

Table 4.1.

Percentage of Students' Attitudes

Interval score	Category	Frequency	Percentage
63 – 75	Strongly positive	7	16
51 – 62	Positive	36	82
39 – 50	Neutral	0	0
27 – 38	Negative	1	2
15 – 26	Strongly negative	0	0
Total		44	100

Table 4.1 shows that 98 % of the students have positive attitude towards learning English. This finding is supported by student's good or poor attitude that makes life easy or difficult in the foreign language classroom (Smith, 1971). The result of this research showed that the students have positive attitude towards learning English. This finding is supported by Smith (1971) finding that students who suffer from strained learning will disadvantage significantly in the learning of language. This means that the students have positive attitude towards learning.

For many reasons, the students of Hotel Department of SMK Negeri 3 Parepare like to learn English. The interview result affirmed the finding that the students were interested in learning English because they chose Hotel department and realized the importance of learning English. This is reflected in the excerpt below:

Excerpt 1:

M: "Why are you interested to learn English?"

W: "It is because I choose Hotel department that using English more"

(W interviewed on 17th, April 2015)

Excerpt 2:

M: "How do you think about the importance of oral and written English?"

H: "I think it is very important, because in my department there are often such forms that have to be filled. So if I do not know English I could not fill the form"

(H interviewed 15th, April 2015)

The students like their teacher when he helped to solve the problem. It can be realized that English as a foreign language sometimes makes the students confused in learning, and the fact that, the interview result shows that the English teacher has an important role to motivate the students in learning English. It is supported by O'Malley and Chamot (1990) that the students who have experienced success in learning have developed confidence in their ability to learn.

4.2. Research Question 2: What learning strategies do they apply based on their attitude?

The finding is shown in the following table:

Table 4.2.

Students' Language Learning Strategies Based On Their Attitude

No.	Learning Strategies	Strongly Positive		Positive		Negative	
		Frequency	%	Frequency	%	Frequency	%
1.	Memory	0	0	3	8.33	0	0
2.	Cognitive	1	14.29	4	11.11	0	0
3.	Compensation	1	14.29	4	11.11	0	0
4.	Metacognitive	4	57.14	13	36.11	1	100
5.	Affective	1	14.29	5	13.89	0	0

6.	Social	0	0	7	19.44	0	0
	Total	7	100	36	100	1	100

Table 4.2 shows that the dominant learning strategy of students is metacognitive strategies. Metacognitive strategies according to Oxford (1990) are actions which go beyond purely cognitive devices, and provide a way for learners to coordinate their own learning process. Metacognitive strategies help learners focus in learning target language. This research is similar to research by Oxford and Burry-Stock (1995) who assessed the use of language learning strategies worldwide and Wu (2008) who conducted a research about language learning strategies use of Chinese ESL learners of Hong Kong.

4.3. Research Question 3: What is students' achievement relating with their strategies?

1. The Students' English Achievement

The students' English achievement of Hotel department is shown in the table below:

Table 4.3.

The Classification and Percentage of Students' English Achievement

No.	Category	Interval Score	Frequency	Percentage
1.	Very Good	9.0 – 10	0	0
2.	Good	7.5 – 8.9	31	70.45
3.	Average	6.0 – 7.4	13	29.54
4.	Poor	0 – 5.9	0	0
	Total		44	100

Based on the data from the teacher, students' learning achievement in English subject showed good score of the students. Most of the students have good score; 70.45 % students got good score and 29.54 % students got average score.

The correlation between students' LLSs and their English achievement can be seen in a statistical analysis below:

Table 4.4 LLSs and Achievement Cross-Tabulation

		Achievement		Total
		Good	Average	
Strategies	Memory	2	1	3
	Cognitive	3	2	5
	Compensation	3	2	5
	Metacognitive	13	5	18
	Affective	6	0	6
	Social	4	3	7
Total		31	13	44

Table 4.5 Chi Square Tests Result

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3,685 ^a	5	,596
Likelihood Ratio	5,302	5	,380
Linear-by-Linear Association	,181	1	,670
N of Valid Cases	44		

a. 10 cells (83,3%) have expected count less than 5. The minimum expected count is ,89.

The table above shows that Pearson Chi square value was 3.68 and the significance was 0.58. Because the significant test is larger than 0.05, therefore H0 is accepted. It means that the dominant categories of language learning strategies that the students use do not correlate with their English achievement. Hence, it could not be assumed that a certain category of language learning strategies is only used by students with certain level of English achievement. This research supports Djamarah and Zain (2006) statement that purpose, teacher, learner, learning and teaching process, evaluation tools, material for evaluation, and situation of evaluation are the factors that can affect the students' achievement.

5. Conclusion

The students have positive attitude towards learning English. They realized that they need English in their department for their future. The students used all language learning strategies in learning English although they have different attitude towards learning English. The achievement is different among the students, no matter that they use language learning strategies or not, but they had different result in learning with different strategies. The researcher addresses suggestions that students understand the need of English in their department; therefore, the teacher should direct the students to practice their English more based on their needs in department. Teachers should help the low achiever students to maintain their motivation and confidence in learning target language through different learning strategies. Teachers should understand the students' strategies towards learning English to create the suitable activities in learning and teaching process.

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The Contribution of Classical Music Given Outdoor to Improve Indonesian High School Students' Ability in Descriptive Text Writing

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Abstract

Some students find it difficult to write in English since they have to find the right vocabulary, use the correct grammar, and state their opinions and others. Therefore, the researchers tried to observe the effectiveness of Classical Music Given Outdoor (CMGO). The objectives of the study are: (1) to determine whether there is significant difference in producing descriptive text between students who are taught using CMGO and those who are taught using traditional method, (2) to find out how well CMGO gives contribution to students' ability in descriptive text writing. It was an experimental research with 205 students of six Senior High Schools in Semarang city, Central Java, Indonesia. The participants were divided into the experimental and control groups. The data were collected by the test, journal and observation. The result of the research showed that the application of CMGO actually gave contribution in improving students' skills to produce descriptive texts. The posttest mean of the experimental group was higher (from 60.27 to 65.20) than the control group (from 60.86 to 62.31). The t-value for two posttest means was 1.982 and the critical value at $\alpha = 5\%$ was 1.97. It means that there was a significant difference of students' skills in producing descriptive text between experimental group and control group. Furthermore, the students' journals and the teachers' observation showed that the experimental groups were more excited than the control groups.

Keywords: Classical Music Given Outdoor (CMGO), Descriptive Text, Indonesian High School Students

1. Introduction

Education is a main factor to determine the life quality of a country. According to Duncan (2013), education is the key to eliminate gender inequality, to reduce poverty, to create a sustainable planet, to avoid needless deaths and illness, and to promote peace. And in a knowledge economy, education is the novel currency by which nations maintain economic competitiveness and global prosperity. As Nelson Mandela says, "education is the most powerful weapon which you can use to change the world."

Education plays an increasingly vital role in supporting a stronger and more globally competitive Indonesia. According to Human Development Report (2013) stated that Indonesia's Human Development Index (HDI) value in 2012 was 0.629—in the medium human development category which indicates that education in Indonesia still has several problems and requests improvements.

In Indonesia, English is deemed as a foreign language instead of a second language. However, as the local communities are becoming more global, so learning and mastering English has become a necessity. Taughsuban (2012) reported a recent survey by Education First (EF), an international language school, that Indonesia ranked 34th out of 44 countries surveyed for adult English proficiency. It means that English Language Teaching (ELT) in Indonesia needs the enhancements which can improve students' English language skills.

Furthermore, Kurniawati (2003) reported that there were many problems of Indonesian education system as Anies Baswedan, an Indonesian education expert, said that less than half of the total number of three million teachers in Indonesia possessed the minimum qualifications to teach, and the education system was plagued by lack of infrastructure and inequality between Java and outer islands. Actually, the Indonesian government always makes efforts to improve the quality of education, such as increasing the school facilities, improving the quality of the teachers and changing the curriculum.

Concerning the 2006 English Curriculum, Indonesian students are expected to develop the English competence to communicate in spoken and written forms. Unfortunately, According to Blair (2008), an Australian teacher who taught in Indonesia, the learning practice in Indonesian class tended to be passive. They studied through the text, learnt the vocabulary and translated each passage into Indonesian, which are the hallmarks of a passive approach. Consequently, this condition will end up in the lack of students' creativity because the human's brain cannot receive the boring uninteresting things (Dryden & Vos, 2003, p. 48)

Therefore, we try to observe the effectiveness of using Classical Music Given Outdoor (CMGO) toward students' writing skill. CMGO is one alternative in ELT combining 'classical music' and 'outdoor teaching'. The strategy is expected to make students relaxed in learning as Lozanov says that a relaxed but focused state is the optimum state for learning to receive the input or information (Dryden & Vos, 2003, p. 50).

Actually, many researchers were interested to find out the influence of classical music toward students' achievement. First, Pourkalthor and Moghaddam (2013) studied about the effect of Mozart Sonata (Background Classical Music) on Iranian EFL learners' speaking proficiency. They found that the effect of background classical music (Mozart Sonata) gave significant influence on students' speaking performance. Next, Carlson, A.M.M. (2015) studied about classical music, writing, and anxiety. The results suggest that listening to classical music during writing can help students to relax and concentrate better. Then, Strachan (2015) did research on the effects of background music on student focus. She found

that student productivity increased with background music, and introducing the appropriate background music can be a simple way to increase student focus.

Getting those positive influences of classical music toward students' achievement, then we are interested to combine it with outdoor learning since the comfortable environment can inspire and stimulate students to write. Classical music and outdoor are expected to give the best atmosphere for all learning styles. According to Dryden and Vos (2003, p. 123), learners are divided into three learning styles; visual learners, kinesthetic learners and auditory learners. Vaishnav (2013) stated that visual learners learn visually by means of charts, graphs, and pictures. Auditory learners learn by listening to lectures and reading. Kinesthetic learners learn by doing. Students can prefer one, two, or three learning styles. Due to these different learning styles, it is urgent for teachers to incorporate in their curriculum activities related to each of these learning styles so that all students are able to succeed in their classes. Therefore; CMGO is appropriate for all those learning types because the environment will stimulate the visual learners, music will stimulate the auditory learners, and the outdoor activities will stimulate the kinesthetic learners. The research was conducted in six senior high schools in Semarang city; they were Senior High School 1 Semarang, Senior High School 5 Semarang, Senior High School 12 Semarang, Senior High School Kesatrian 1 Semarang, Senior High School Teuku Umar Semarang, and Senior High School Walisongo Semarang in Central Java, Indonesia. Based on the background above, the research questions are:

- 1) Is there any significant difference of students' skill in descriptive writing between the students who are taught using CMGO and those who are taught using the traditional method?
- 2) How effective is CMGO in improving students' ability in descriptive writing?

2. Review of Related Literature

2.1. Classical Music Given Outdoor

Classical Music Given Outdoor (CMGO) is a learning strategy which we propose to enhance students' writing skill in the teaching-learning process that combines 'classical music' and outdoor teaching'. Merriam-Webster Dictionary defines classical music is "of, relating to, or being music in the educated European tradition that includes such forms as art song, chamber music, opera, and symphony as distinguished from folk or popular music or jazz". Based on Jiang, Lu, Zhang, Tao, and Cai (2002 p.113-116), classical music is further

classified into baroque music and romantic music, which correspond to the baroque era and romantic era in western music history respectively. Next, Campbell, a classical musician as cited in Swaminathan (2007), believes that classical music has a tremendous organizing quality to the brain, which can improve human ability to be intelligent. Moreover, music can bring psychological effects to its listeners. Herbert (2015) said that hearing a piece of music stimulates primitive, evolutionarily ancient and deep brain structures. It means that music affects us on an unconscious level before we have time to think about it. Therefore, Georgi Lozanov and Evalina Gateva give some choices of music which can be used in learning such as Beethoven, Mozart, Brahms, Haydn, Vivaldi, Handel, J.S. Bach, Corelli and Couperin. (Dryden & Vos, 2003, p. 315)

Then, CMGO strategy also needs outdoor as the place for writing. Based on Lappin (1984), outdoor place engages students in adventurous and environmental activities and it makes students see a lot of things such as green plants and grass, blue sky, insects and others. Both classical music and outdoor create an interesting condition in learning because students feel, see, and enjoy the beauty of nature while listening to the classical music. If students enjoy the teaching learning process, they can think and imagine something (which will be written) more easily on a paper. The following is a suggestion that can be used to help the second language learners in writing.

2.2. Practical Suggestions

EFL Level : Elementary – Lower Intermediate

Writing Theme : Describing the Zoo

Classical Music : Mozart

Duration : 90 minutes

Activities :

- 1) Teacher gives motivation for students that the key to do everything; e.g. writing in English is confidence (5 minutes)
- 2) Teacher prepares and chooses the appropriate outdoor and music for students. (3 minutes)
- 3) Teacher instructs students to choose the most comfortable learning position in a limited place (5 minutes)
- 4) Teacher plays the classical music and instructs students to write descriptive text (students can ask questions if they do not understand about the lesson) (10 minutes)

The example of instructions for the topic, The Zoo;

- a) Relax your body, students!

- b) Close your eyes and listen to the music!
 - c) Think about the zoo and find words related to the zoo
 - d) Open your eyes and write down the words and create sentences for the words!
- 5) Teacher asks students to write descriptive text while listening to the classical music (the duration of writing is about 60 minutes)
 - 6) Teacher gives evaluation and reinforcement at the end of the lesson. (7 minutes)

2.3. Descriptive Text Writing

Writing is one component of English language skills. According to Harmer (2006, p. 79), writing is a basic language skill, as important as speaking, listening and reading. Writing is an activity to produce a sequence of sentences arranged in a particular order and linked together in certain ways. In addition, Nunan (2003, p. 88) states that writing is the mental work of inventing ideas, thinking about how to express them, and organizing them into statements and paragraphs that will be clear to a reader. The 2006 English Curriculum targets the Senior High School students to be able to understand various types of texts, i.e. descriptive, procedure, recount, narrative, and report. Descriptive text is a text to describe what a person or a thing is like. According to Larson (1984) as cited in Puji (2014), the purpose of descriptive text is to describe and reveal a particular person, place, or thing. Based on Mukarto (2007, p. 56), the generic structure of this text consists of two elements: (1) identification (identifies phenomenon to be described) and (2) description (describes parts, qualities and characteristics).

There are many learning strategies which were applied to improve students' descriptive text writing. First, Hadini, Yunus, and Fiftinova (2015) analyzed about teaching descriptive writing through genre-based approach. They found that there was a significant improvement of students' skills in writing descriptive texts after they were taught by the genre-based approach. Next, Hasan (2013) studied about the effectiveness of using English songs to teach descriptive writing (an experimental research with the eighth grades at SMPN 28 Mangkang Semarang in the academic year of 2012/2013). He found that there was a significant difference between the experiment class which was taught with English songs and the control class which was taught without English songs. It was proved by the obtained score of t-test. The t-test showed that t-score 2.710 was higher than t-score on the table 1.67. Then, Linarti, Wijaya, and Suhartono (2015) used photograph as media guided questions as a technique in teaching descriptive text writing to the tenth grade students of SMA Panca Bhakti Pontianak in academic year 2011/2012. They found that using the media is effective to improve students' writing.

Considering those innovative learning strategies, we suppose that CMGO can be an alternative learning strategy to advance students' writing skills since learning should be amusing and effective.

3. Method

It was an experimental research consisting of two groups of subjects: An experimental group and a control group. The experimental group undergoes the treatment, program or intervention of interest. Then, the researchers measure the differences between the two groups on a particular outcome.

3.1. Population and Sample

The population was the second year of Senior High Schools students in Semarang city, Indonesia in the academic year of 2013/ 2014. In order to study a population more effectively, we selected a sample by stratified sampling. Weisstein (2015) said that a sample is a subset of population that is obtained through some process, possibly random selection or selection based on a certain set of criteria, for the purposes of investigating the properties of the underlying parent population. Then, based on Kaplan (2014), stratified random sampling is a probabilistic sampling option. The first step in stratified random sampling is to split the population into strata, i.e. sections or segments. Therefore, we selected six schools consisting of three private senior high schools with the different grade and three state senior high schools with different grade; they are Senior High School N 1 Semarang (high grade), Senior High School N 5 Semarang (medium grade), Senior High School N 12 Semarang (low grade), Senior High School Kesatrian 1 Semarang (high grade), Senior High School Teuku Umar Semarang (medium grade), and Senior High School Walisongo Semarang (low grade). There were 205 students divided into two groups, the experimental and control groups.

3.2. The Research Instrument

There were three research instruments to investigate the issue. First, the essay test was used to check students' skill in writing. Second, students' journal was used to understand students' impressions toward the learning either with CMGO or traditional method. Third, the observation was used to check students' responses during the teaching learning process.

3.3. Experimental Design

It was a 'pretest - posttest' study. It is a design in which one or more experimental groups are exposed to a treatment or intervention and then compared to one or more control groups

who do not receive the treatment (Dimitriv, 2003, p.159). The design can be described as follows:

E 01 X 02
 C 03 Y 04

Notes:

- E : Experimental Group
- C : Control Group
- X : Treatment of CMGO (Classical Music Given Outdoor)
- Y : Treatment of Traditional Method
- 01 : Pretest of Experimental Group
- 02 : Posttest of Experimental Group
- 03 : Pretest of Control Group
- 04 : Posttest of Control Group

3.4. Scoring Technique

An analytic scale was used to assess the test papers. O'Malley and Pierce (1996, p. 144) stated that analytic scale separates the features of a composition into components that are each can be scored separately. In giving score to students' writings, the researcher used the scoring guidance taken from Heaton's categories in five components; they are fluency, grammar, vocabulary, relevance and mechanics (1990, p. 110). (See appendix 1)

In classifying the score, we used the measurement of students' achievement suggested by Harris (1969, p. 134). The total score is 25. When a student gets 25, it means s/he gets score 100 (25 x 4) because the range is 10-100 as we can see in Table 2. The lower score, the lower points s/he gets.

Table 1.

Criteria of Students' Ability

Criteria of Assessment	Grade
91-100	Excellent
81-90	Very good
71-80	Good
61-70	Fair
51-60	Poor
Less than 50	Very poor

3.5. The Hypothesis

The hypothesis is an essential research device that guesses a focus of the investigation and permits researchers to reach a probable conclusion. The null hypothesis (H_0) of the research

is “there is no significant difference between writing a descriptive text through Classical Music Given Outdoor (CMGO) and writing a descriptive text through traditional teaching”.

4. Discussion

4.1. The Research Data

We conducted the pretest and posttest for the both groups (control and experimental group). Then, comparing participants' posttest scores to their pretest scores enables to see whether the strategy was successful in increasing students' writing skill or not. The samples were 205 Students of 6 Senior High Schools in Central Java, Indonesia.

4.2. Try Out

Primary data were collected by an essay instrument and before it was applied to the samples, it needed to be tried out. Tryout or trial was necessary since the result was used to make sure that the measuring instrument had validity and reliability. It was conducted at Senior High School 1 Semarang consisting of 35 students.

(1) Validity

From writing a descriptive text test, it was obtained that all components of writing (fluency, grammar, vocabulary, content and spelling) were 100% valid. The complete analysis can be seen in appendix 2.

(2) Reliability

The reliability of the instrument was obtained 0.585. For $\alpha = 5\%$ with $N = 35$, the obtained r-table was 0.361. Since the result of the instrument reliability (0.585) was higher than the critical value (0.361), it was considered that the instrument was reliable. The complete analysis can be seen in appendix 2.

4.3. Pretest Result

Six pretests were conducted from 12 February until 12 March 2013 at six (6) high schools in Semarang. The pretests were conducted using the same protocol and setting for both groups. They wrote in the classroom as usual without listening to the classical music. This activity was done to measure students' achievement in writing descriptive texts. By conducting this activity, we knew whether students understood and could write descriptive texts or not.

Here are the writing samples of pretest in both groups.

Respondent No. : K-69

Pretest Control Group

Wonokromo Zoo

Wonokromo zoo is in Surabaya, East Java. East Java is near with Central Java. Central Java, West Java and East Java are in Java Island. Surabaya is capital of East Java.

In Wonokromo zoo to be found a lot of species of animals, for example, a lot of birds, fish, reptile, etc. We can see comodo in there, when we can't see it. We don't visit to Nusatenggara Island, Well East Nusatenggara or West Nusatenggara. And we can see Rangrong Bird, Piegon Bird, Camel Bird, Giraffe, Arwana Fish and many other. We can enjoy in there because in Wonokromo zoo to be found a seldom flower, example, Rafflesia Arnoldi. In souvenir Wonokromo to be found a cafeteria, we can buy souvenir, drink, food in there when we feel hungry.

Words: 129
Scores : 58

- Fluency :3
- Grammar :2
- Vocabulary :3.5
- Content :3
- Spelling :3

Respondent No. : E-43

Pretest Experimental Group

Gembira Loka

Gembiraloka is located in Semarang City, Central Java, Indonesia. In Gembiraloka are monkey, duck, chicken, hipopotamus, giraffe, tiger, camel, crocodile, snakes, etc. There also has many plants. It is located in high land, so there has many plants.

There are many animals and plants from a lot of places, from east Indonesia until west Indonesia. There are also? from many countries in the world. Such as, panda from China, crocodile from Africa, bear from Europe, and many kinds of pisces from central America.

Gembiraloka is very interested. There are many game parks to play many games in the park or the ground. It is very fun and enjoyed. Beside that, we can feed many animals with many snacks and peanuts.

Words: 120
Scores : 56

- Fluency :3
- Grammar :2
- Vocabulary :3
- Content :3
- Spelling :3

As we can see on the writings above, they show that there are many mistakes either on control group or experimental group. The underlined words above show the mistakes in fluency, grammar, spelling and vocabulary. The students' writings are assessed with the writing rubric by Heaton (see Appendix 1). The mean score of each component can be seen below.

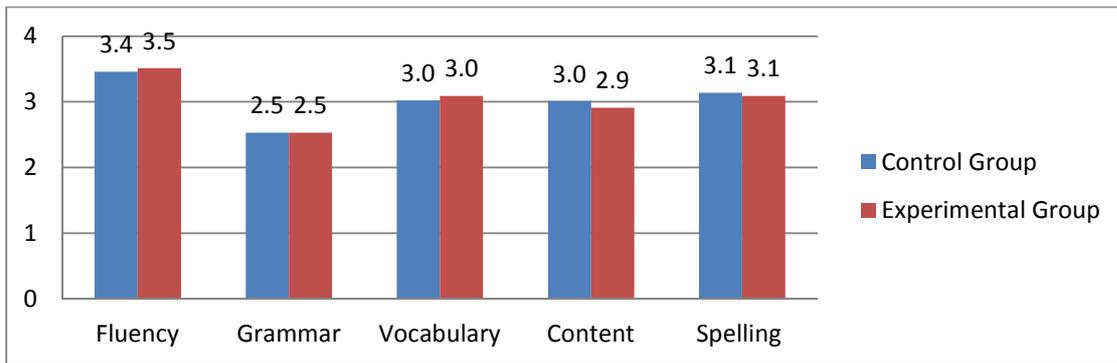


Chart 1. The Mean Score of Each Component at Pretest

Chart 1 shows the mean scores of each component for both groups are almost similar. Most students got the poorest score on grammar. It is only 2.5; it means that they make major mistakes that lead to difficulty in understanding. They were lack mastery of sentence construction and sentence order. After all scores of each component were added and multiplied by 4, we got the pretest scores for both groups as we can see below. (The detailed scores of students' writings at pretest can be seen in Appendix 2).

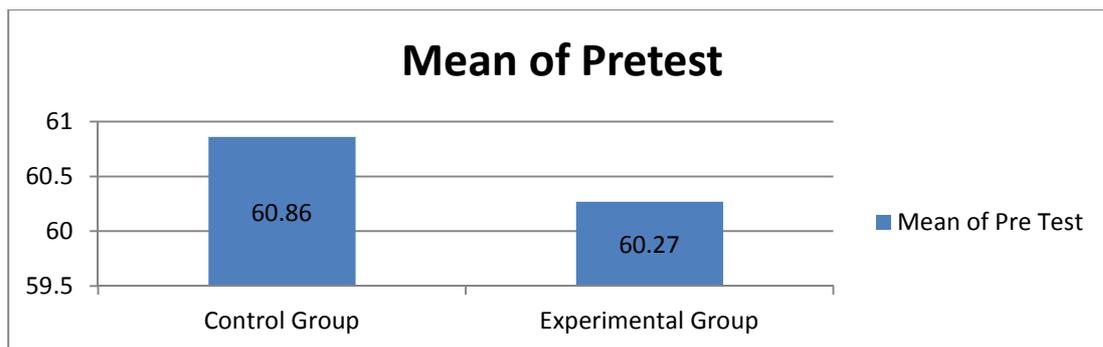


Chart 2. Pretest Score for Control Group and Experimental Group

Chart 2 shows that the mean of control group is better than that of the experimental group. The mean is only 60.27 for the experimental group and 60.86 is for the control group but according to Harris (1969, p. 134), they are in the same level; it is *Fair* (61-70).

4.4. Posttest Result

Posttests were conducted from 15 April until 20 April 2013 at 6 schools. The posttests were conducted with different treatments for both groups. For the control group, they wrote in the classroom with the traditional method; i.e. the students sat in the classroom as usual when they were writing. In the experimental group, they got CMGO strategy. It allowed them to go outside, and to have relaxed sitting while listening on the classical music. The writing samples of the control and experimental groups can be seen below.

Respondent No. : K-69

Posttest Control Group

Ragunan Zoo

Ragunan zoo is one of large zoo in Indonesia. It is located in Jakarta, DKI Jakarta. Ragunan zoo consist of 3 part. They are animal of water, land and air. The animal water consist of 2 species they are reptile and fish. In there found a halicore fish. It is very unique because the body very fat and this head very small. In holiday,

Ragunan zoo always noisy of people. They are come from near of Jakarta, come from east java, central java and west java. In there found a small cafeteria, to buy food or drink in there. Whether a hot or cold.

We can buy souvenir of this animal such as a nemo doll, halicore dugong hat or t-shirt. We also found a statue of parrot or feather bird of paradise.

Words: 133

Scores : 58

- Fluency :3
- Grammar :2
- Vocabulary :3.5
- Content :3
- Spelling :3

Respondent No. : E-43

Posttest Experimental Group

Tinjomoyo

Tinjomoyo is a famous zoo in Semarang city. Tinjomoyo zoo is located in Kecamatan Tinjomoyo Semarang, Central Java with total area of 125,000 m2. It is built with the government money. There are monkey, zebra, giraffe, lion, tiger, elephant, turtles, buffalo, cheetah, crocodile, horse, birds, snake, kangaroo, cow, bear, panda and etc. Tinjomoyo is very interesting and conform for the family which want to spend holiday time. There are also many games, play garden, and swimming pool in Tinjomoyo zoo.

Tinjomoyo zoo is very popular in Semarang people. Because of its comfortable and ticket price which cheap enough? Local tourists and foreign tourists like to come and enjoy Tinjomoyo zoo happily. There, we can find many differential thing and, we can get the new experiences in Tinjomoyo zoo. If you are travelling in semarang city, don't worry to come Tinjomoyo zoo. But Tinjomoyo zoo have been moved to Mangkang

Words: 150

Scores : 58

- Fluency :3
- Grammar :2
- Vocabulary :3.5
- Content :3
- Spelling :3

As we can see from the underlined words above, the students still made many mistakes in fluency, grammar, vocabulary, content and spelling. The significant difference in both writings was related to the numbers of vocabulary. The detailed scores of students' writings at posttest can be seen in Appendix 3.

The mean score of each component writing scoring at the posttest can be seen below.

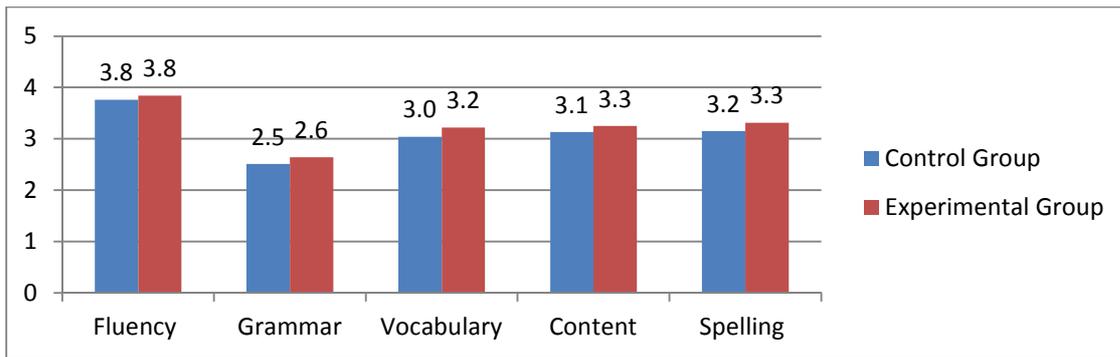


Chart 3. The Mean Score of Each Component at Posttest

Chart 3 shows that all the components of experimental groups' writing are better than those of the control groups. Grammar is still the most difficult component and fluency gets the highest score. After all the scores of each component are added and multiplied by 4, the mean of the posttest for both groups can be seen below.

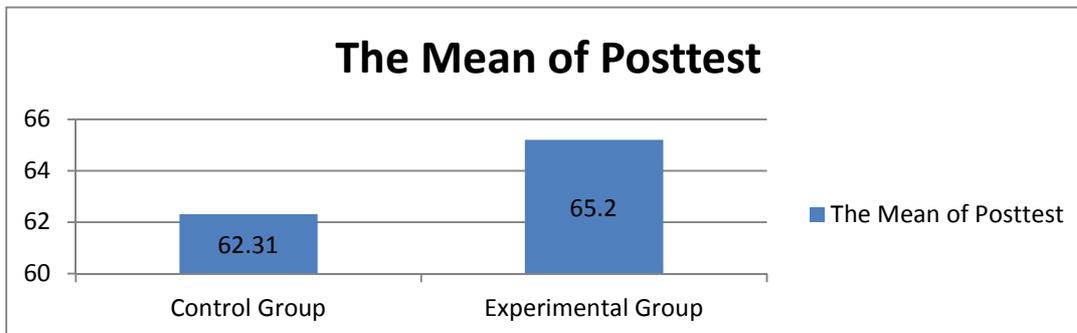


Chart 4. The Mean of Posttest for Control Group and Experimental Group

Chart 4 shows that the posttest mean score for experimental group was 65.20 whereas the mean score for the control group was 62.31. The achievement of the experimental group is higher than that of the control group but their writings are still in *Fair* level (61-70).

4.5. The Contribution of Classical Music Given Outdoor

After getting all writing scores, the next step is to determine the different effectiveness of treatment given to both groups, which is reflected on the means gathered. The method for comparing two sample means is very similar. The only two differences are the equation used to compute the t-statistic, and the degrees of freedom for choosing the tabulate t-value. The formula is given by Stone and Ellis (2006) which can be seen below.

$$t = \frac{\bar{X}_1 - \bar{X}_2}{s \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

In this case, we need two separate sample means, standard deviations and sample sizes. The number of degrees of freedom is computed using the formula suggested by Stone and Ellis (2006).

$$s = \sqrt{\frac{(n_1-1)s_1^2 + (n_2-1)s_2^2}{n_1+n_2-2}}$$

Which,

t : t-test

x₁ : mean of the control group

x₂ : mean of the experimental group

s : standard deviation of both groups

s₁ : square of variance of the control group

s₂ : square of variance of the experimental group

n₁ : number of sample of the control group

n₂ : number of sample the experimental group

(1) *t-test of Pretest Data*

After calculating the mean of the control and experimental group, the researchers calculated with the deviation of each group first. The pretest data of both groups can be seen as follows:

Table 2.

Pretest Data between Experimental Group and Control Group.

	Experimental Group	Control Group
Sum	6280	6280
__N	103	102
X	60.27	60.86
Variance (s ²)	118.3567	101.2681
Standard Deviation	10.88	10.06

Based on the data table above, the deviation of pretest data of the control and experimental group as follows:

$$s = \sqrt{\frac{(103 - 1)118.36 + (102 - 1)101.27}{103 + 102 - 2}} = 10.4812$$

The computation of t-test as follows:

$$t = \frac{60.27 - 60.86}{10.4812 \sqrt{\frac{1}{103} + \frac{1}{102}}} = -0.4036$$

The t-value of pretest data of the control and experimental group is -0.4036, for $\alpha = 5\%$ with $dk = 17+17 - 2=32$, we was obtained $t(0.95)(32)= 1.97$. The H_0 acceptance area can be seen on figure 1 below.

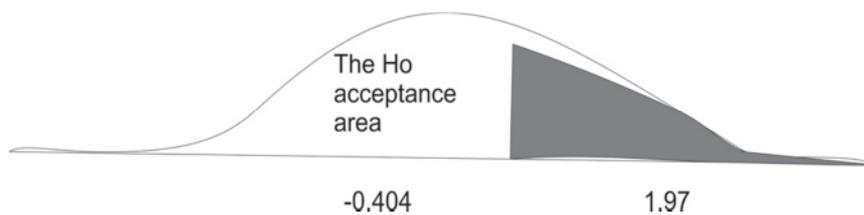


Figure 1. t-test between Experimental Group and Control Group of Pretest

Because the t-value is in the H_0 acceptance area, it is concluded that the experimental group is not better than control group. There is no significant difference between the experimental and control groups in the pretest. It means students' ability in both groups is same at the beginning.

(2) *t-test of Posttest Data*

After both groups got the treatments, the researchers got the posttest data which can be seen on Table 3:

Table 3.

Posttest Data between Experimental Group and Control Group

	Experimental Group	Control Group
Sum	6716	6356
$_N$	103	102
X	65.20	62.31
Variance (s^2)	129.5168	88.2174
Standard Deviation	11.38	9.39

(s)

Based on the table above, the computation of the deviation value of posttest data of the control and experimental group is:

$$s = \sqrt{\frac{(103 - 1)129.52 + (102 - 1)88.22}{103 + 102 - 2}} = 10.4388$$

Then the computation of t-test is as follows:

$$t = \frac{65.20 - 62.31}{10.4388 \sqrt{\frac{1}{103} + \frac{1}{102}}} = 1.982$$

The t-value of posttest data of the control and experimental groups is 1.982, for a =5 % with dk =17+17-2 = 32, it was obtained $t(0.95)(32) = 1.97$. The H_0 acceptance area can be seen on the figure 1b below.

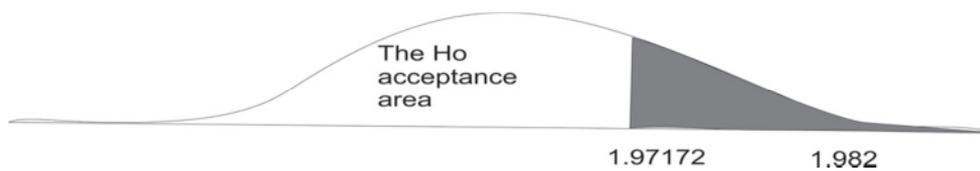


Figure 2. t-test between Experimental Group and Control Group of Posttest

Because the t-value is in the H_0 rejection area, it is concluded that the experimental group is better than control group. Therefore, H_0 (the null hypothesis) that “ there is no significant difference between writing a descriptive text through Classical Music Given Outdoor (CMGO) and writing a descriptive text through traditional teaching” is rejected.

CMGO is the treatment which allows students to sit and write comfortably. Students can sit anywhere such as, on the grass, on the bench, on the chairs, under the trees, near to the plants and so forth as far as they can listen to the classical music when the teacher plays it. It is expected that students to be unbound and limitless while they are writing. This stress-free state makes them get the ideas or inspiration easily because writing is not only about the techniques but also about the content.

We conducted the CMGO at six (6) different schools. It was very remarkable because each school had its own characteristics. For example, at Teuku Umar High School, the place for experimental group was too close to the road. Consequently, the noise interfered with the treatment and students were disturbed by the condition. Hence; it was suggested to find the more relaxing place which was far from the noise.

Next, CMGO needs the ideal place and time to be implemented. Semarang is sunny tropical city; hence, the time and place should be seriously considered. The ideal place is the park or the yard which many trees surround students for getting the ideal temperature. The

scenery, the wind, and the atmosphere encourage students to be active in writing because they were in a peaceful condition.

Unfortunately, when we applied it, there were some weaknesses of this strategy such as:

a. It is hard to do CMGO if the weather is raining or too hot/ dry.

Uncomfortable weathers make students idle to write because they do not focus on the learning. Therefore; if the place is not favorable, it requires to be moved to the ideal space. If it is raining, the place can be changed into semi-indoors which enable students write cheerfully and do not get wet.

b. It requests a certain circumstance to apply the CMGO.

Each school is unique and special which has different characteristics. As suggested, the strategy needs the ideal atmosphere where students can enjoy the beautiful scenery and can listen to the classical music well. However, some schools are nearby the road or market where the noise can interrupt the treatment. Thus, teachers need to locate the place well. Yet, teachers can move the class out of the school to obtain the fine venue.

As the supplementary data, we distributed students' journals and did the observation. Observation is done by the researchers/teachers to monitor the process of writing. After being tested to write an essay test, the students in both groups wrote their impressions on the lessons in 5 minutes. The students called for their impression on the teaching methods. After collecting the journals, we compared the results between the experimental and control groups to analyze their positive or negative feelings toward the two methods. Indeed, students' journals showed that experimental group was happier. A student said "it is very fun to write with classical music given outdoor because I can get inspirations so I can create paragraphs easily".

It is expected then that further research is undertaken indoors, especially in the rainy seasons or schools which do not have outdoor space to conduct the CMGO, for example by creating the classroom comfortable for all those learning types, playing the appropriate classical music on the teaching and learning process and so forth in order to explore deeper into how the strategy may serve to enhance students' writing skills. It is also quite challenging to discover the effectiveness of CMGO strategy if the place is moved to the various situations such as, in the market, in the unfortunate areas, in the hospital, in the industry areas and so on in which the classical music can be listened through the earphone.

Learning should be fun. If students feel happy and relaxed in learning, they will be enthusiastic to keep learning. Even, if there are two students who get the same score; the first

student learns happily and another one learns it uninterestedly. Thus; a joyful condition gives the positive value because it motivates him/ her to learn English more and more.

5. Conclusion

It is concluded that:

- 1) H_0 (the null hypothesis) “there is no significant difference between writing a descriptive text through Classical Music Given Outdoor (CMGO) and writing a descriptive text through traditional teaching” is rejected because there is a significant difference in students’ skill in producing descriptive text in the experimental and control groups.
- 2) The application of classical music given outdoor gave contribution in improving students’ skill in producing descriptive texts. The mean of the experimental group score was higher (from 60.27 to 65.20) than that of the control group (from 60.86 to 62.31). The t-test measurement for two means of posttest was 1.982. The critical value at $\alpha = 5\%$ was 1.97. Because the t-value is in the H_0 rejection area, it is concluded that the experimental group is better than the control group.

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Appendix 1

THE SCORING GUIDANCE TAKEN FROM HEATON GRID

Components	Score	Characteristics
Fluency	5	Flowing style- very easy to understand- both complex sentences very effective
	4	Quite flowing style- mostly easy to understand- a few complex sentences very effective
	3	Style reasonably smooth- not too hard to understand and enjoy complex sentence fairly effective
	2	Jerk style- an effort needed to understand and enjoy complex sentences confusing- mostly simple sentences or compound sentences
	1	Very jerky- hard to understand- can not enjoy reading- almost all simple sentences- complex sentences- excessive use of “and”
Grammar	5	Mastery of grammar taught on course – only 1 or 2 minor mistakes
	4	A few minor mistakes only (preposition, articles, etc)
	3	Only one major mistake but a few minor mistakes
	2	Major mistakes that lead to difficult in understand- lack mastery of sentence construction
	1	Numerous serious mistakes- no mastery of sentences construction
Vocabulary	5	Use of wide range of vocabulary taught previously

	4	Good use of new words acquired- fairly appropriate synonyms, circulations
	3	Attempts to use words acquired- fairly appropriate vocabulary on the whole but sometimes restricted has resort to use synonym, etc on a few occasions.
	2	Restricted vocabulary- use of synonym (but not always appropriate)
	1	Very restricted vocabulary- use of synonyms seriously hinders communication
Content	5	All sentences support the topic- highly organized-clear progression of ideas- well linked- like educated native speakers
	4	Ideas well organized- links could occasionally be clearly but communication not improved
	3	Some lacks of organization-re-ready required for classification of ideas
	2	Little or attempt at connectivity- thought readers can deduce some organization- individuals' ideas may be clear but very difficult to deduce connection between them
	1	Lack of organization- serve that communication is seriously impaired
Spelling	5	No errors
	4	One or two errors only (e.g. le or el)
	3	Several errors- some interfere with communication- not too hard to understand
	2	Several errors- some interfere with communication- some words very hard to organize
	1	Numerous errors- hard to recognize several words- communication made very difficult.

Appendix 2 The Item Analysis of the Try Out Descriptive Text Writing

N0	Code	Components of Writing				
		F	G	V	C	S
1	N1/R-1	5	3	4	4	3
2	N1/R-2	3	3	3	3	4
3	N1/R-3	3	3	3	4	4
4	N1/R-4	4	2	4	3	4
5	N1/R-5	4	2	4	3	4
6	N1/R-6	4	3	4	3	2
7	N1/R-7	3	4	3	4	4
8	N1/R-8	4	3	4	3	3
9	N1/R-9	5	3	4	4	3
10	N1/R-10	4	3	3	4	4
11	N1/R-11	4	2	4	3	3
12	N1/R-12	5	4	4	4	4

13	N1/R-13	3	3	3	4	4
14	N1/R-14	3	3	3	3	3
15	N1/R-15	3	2	3	2	4
16	N1/R-16	4	3	4	4	3
17	N1/R-17	5	3	4	4	3
18	N1/R-18	3	3	3	4	4
19	N1/R-19	4	3	3	4	4
20	N1/R-20	3	2	2	2	2
21	N1/R-21	5	3	3	4	4
22	N1/R-22	3	3	4	4	4
23	N1/R-23	4	3	4	3	4
24	N1/R-24	3	3	4	4	3
25	N1/R-25	4	3	3	3	4
26	N1/R-26	2	2	3	3	3
27	N1/R-27	4	3	3	4	4
28	N1/R-28	4	3	4	4	3
29	N1/R-29	4	3	3	4	4
30	N1/R-30	3	3	3	3	4
31	N1/R-31	3	3	3	4	4
32	N1/R-32	4	3	4	3	3
33	N1/R-33	2	2	3	2	4
34	N1/R-34	3	3	3	4	3
35	N1/R-35	5	3	3	4	4

CORRELATIONS

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/PRINT=TWOTAIL NOSIG
/MISSING=PAIRWISE.

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Correlations

Notes

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	Cases Used	Statistics for each pair of variables are based on all the cases with valid data for that pair.

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	/PRINT=TWOTAIL NOSIG	
	/MISSING=PAIRWISE.	
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		F	G	V	C	S	Total
F	Pearson Correlation	1	,317	,473**	,394*	-,060	,751**
	Sig. (2-tailed)		,063	,004	,019	,734	,000
	N	35	35	35	35	35	35
G	Pearson Correlation	,317	1	,108	,672**	,167	,694**
	Sig. (2-tailed)	,063		,538	,000	,337	,000
	N	35	35	35	35	35	35
V	Pearson Correlation	,473**	,108	1	,178	-,226	,499**
	Sig. (2-tailed)	,004	,538		,307	,191	,002
	N	35	35	35	35	35	35
C	Pearson Correlation	,394*	,672**	,178	1	,203	,785**
	Sig. (2-tailed)	,019	,000	,307		,243	,000
	N	35	35	35	35	35	35
S	Pearson Correlation	-,060	,167	-,226	,203	1	,332
	Sig. (2-tailed)	,734	,337	,191	,243		,051
	N	35	35	35	35	35	35
Total	Pearson Correlation	,751**	,694**	,499**	,785**	,332	1
	Sig. (2-tailed)	,000	,000	,002	,000	,051	
	N	35	35	35	35	35	35

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

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RELIABILITY
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/SCALE('ALL VARIABLES') ALL
/MODEL=ALPHA.
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Reliability

Notes

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	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.	
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Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	35	100,0
	Excluded ^a	0	,0
	Total	35	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,585	5

Appendix 3

The Result of Pretest between Experimental Group and Control Group

Experimental Group		Control Group	
Code	Score	Code	Score
E-01	68.00	K-01	60.00
E-02	76.00	K-02	76.00
E-03	76.00	K-03	56.00
E-04	56.00	K-04	72.00
E-05	64.00	K-05	76.00
E-06	76.00	K-06	72.00
E-07	64.00	K-07	72.00
E-08	56.00	K-08	52.00
E-09	56.00	K-09	72.00
E-10	72.00	K-10	52.00

E-11	52.00	K-11	72.00
E-12	64.00	K-12	76.00
E-13	68.00	K-13	72.00
E-14	80.00	K-14	68.00
E-15	60.00	K-15	64.00
E-16	72.00	K-16	48.00
E-17	56.00	K-17	68.00
E-18	64.00	K-18	68.00
E-19	56.00	K-19	72.00
E-20	52.00	K-20	68.00
E-21	64.00	K-21	72.00
E-22	80.00	K-22	64.00
E-23	76.00	K-23	52.00
E-24	48.00	K-24	76.00
E-25	72.00	K-25	80.00
E-26	52.00	K-26	72.00
E-27	68.00	K-27	60.00
E-28	76.00	K-28	76.00
E-29	60.00	K-29	52.00
E-30	64.00	K-30	64.00
E-31	68.00	K-31	68.00
E-32	72.00	K-32	56.00
E-33	80.00	K-33	76.00
E-34	76.00	K-34	80.00
E-35	76.00	K-35	76.00
E-36	72.00	K-36	56.00
E-37	40.00	K-37	56.00
E-38	64.00	K-38	64.00
E-39	68.00	K-39	60.00
E-40	52.00	K-40	68.00
E-41	60.00	K-41	56.00
E-42	76.00	K-42	52.00
E-43	58.00	K-43	56.00
E-44	62.00	K-44	52.00
E-45	64.00	K-45	60.00
E-46	64.00	K-46	60.00
E-47	64.00	K-47	68.00
E-48	64.00	K-48	52.00
E-49	72.00	K-49	60.00
E-50	48.00	K-50	64.00
E-51	48.00	K-51	56.00
E-52	60.00	K-52	64.00

E-53	60.00	K-53	68.00
E-54	72.00	K-54	56.00
E-55	48.00	K-55	52.00
E-56	40.00	K-56	52.00
E-57	60.00	K-57	68.00
E-58	56.00	K-58	52.00
E-59	76.00	K-59	60.00
E-60	40.00	K-60	68.00
E-61	52.00	K-61	52.00
E-62	44.00	K-62	80.00
E-63	40.00	K-63	60.00
E-64	48.00	K-64	72.00
E-65	64.00	K-65	36.00
E-66	60.00	K-66	48.00
E-67	48.00	K-67	66.00
E-68	36.00	K-68	60.00
E-69	64.00	K-69	58.00
E-70	52.00	K-70	64.00
E-71	72.00	K-71	40.00
E-72	56.00	K-72	84.00
E-73	44.00	K-73	68.00
E-74	60.00	K-74	64.00
E-75	52.00	K-75	56.00
E-76	68.00	K-76	40.00
E-77	52.00	K-77	52.00
E-78	72.00	K-78	52.00
E-79	44.00	K-79	60.00
E-80	68.00	K-80	52.00
E-81	52.00	K-81	52.00
E-82	80.00	K-82	52.00
E-83	56.00	K-83	52.00
E-84	44.00	K-84	52.00
E-85	60.00	K-85	60.00
E-86	52.00	K-86	56.00
E-87	68.00	K-87	56.00
E-88	52.00	K-88	64.00
E-89	72.00	K-89	64.00
E-90	44.00	K-90	48.00
E-91	68.00	K-91	48.00
E-92	52.00	K-92	48.00
E-93	64.00	K-93	44.00
E-94	44.00	K-94	48.00

E-95	68.00	K-95	60.00
E-96	48.00	K-96	64.00
E-97	64.00	K-97	48.00
E-98	56.00	K-98	64.00
E-99	54.00	K-99	60.00
E-100	52.00	K-100	48.00
E-101	54.00	K-101	68.00
E-102	44.00	K-102	48.00
E-103	56.00		
Total =	6208.00	Total =	6208.00
Average =	60.27	Average =	60.86

Appendix 4

The Result of Posttest between Experimental Group and Control Group

Experimental Group		Control Group	
Code	Score	Code	Score
E-01	80.00	K-01	72.00
E-02	72.00	K-02	68.00
E-03	80.00	K-03	68.00
E-04	68.00	K-04	76.00
E-05	76.00	K-05	76.00
E-06	68.00	K-06	64.00
E-07	72.00	K-07	72.00
E-08	80.00	K-08	72.00
E-09	64.00	K-09	76.00
E-10	80.00	K-10	76.00
E-11	68.00	K-11	68.00
E-12	60.00	K-12	68.00
E-13	64.00	K-13	68.00
E-14	84.00	K-14	72.00
E-15	52.00	K-15	76.00
E-16	76.00	K-16	68.00
E-17	76.00	K-17	64.00j
E-18	80.00	K-18	64.00
E-19	60.00	K-19	80.00
E-20	68.00	K-20	72.00
E-21	80.00	K-21	60.00
E-22	72.00	K-22	76.00
E-23	76.00	K-23	60.00

E-24	68.00	K-24	72.00
E-25	76.00	K-25	76.00
E-26	72.00	K-26	68.00
E-27	72.00	K-27	76.00
E-28	76.00	K-28	76.00
E-29	72.00	K-29	72.00
E-30	76.00	K-30	72.00
E-31	80.00	K-31	72.00
E-32	72.00	K-32	64.00
E-33	76.00	K-33	68.00
E-34	80.00	K-34	68.00
E-35	76.00	K-35	72.00
E-36	72.00	K-36	56.00
E-37	48.00	K-37	68.00
E-38	76.00	K-38	52.00
E-39	80.00	K-39	56.00
E-40	72.00	K-40	68.00
E-41	56.00	K-41	80.00
E-42	88.00	K-42	56.00
E-43	64.00	K-43	60.00
E-44	80.00	K-44	64.00
E-45	84.00	K-45	60.00
E-46	60.00	K-46	68.00
E-47	56.00	K-47	72.00
E-48	56.00	K-48	80.00
E-49	56.00	K-49	60.00
E-50	68.00	K-50	56.00
E-51	72.00	K-51	36.00
E-52	56.00	K-52	64.00
E-53	48.00	K-53	64.00
E-54	64.00	K-54	60.00
E-55	56.00	K-55	60.00
E-56	56.00	K-56	60.00
E-57	52.00	K-57	56.00
E-58	44.00	K-58	56.00
E-59	76.00	K-59	52.00
E-60	48.00	K-60	48.00
E-61	60.00	K-61	52.00
E-62	48.00	K-62	56.00
E-63	52.00	K-63	56.00
E-64	48.00	K-64	60.00
E-65	64.00	K-65	60.00

E-66	60.00	K-66	56.00
E-67	48.00	K-67	56.00
E-68	40.00	K-68	44.00
E-69	56.00	K-69	48.00
E-70	48.00	K-70	44.00
E-71	60.00	K-71	56.00
E-72	60.00	K-72	68.00
E-73	60.00	K-73	52.00
E-74	64.00	K-74	60.00
E-75	60.00	K-75	64.00
E-76	80.00	K-76	64.00
E-77	64.00	K-77	64.00
E-78	64.00	K-78	56.00
E-79	60.00	K-79	52.00
E-80	60.00	K-80	68.00
E-81	56.00	K-81	60.00
E-82	60.00	K-82	56.00
E-83	56.00	K-83	64.00
E-84	60.00	K-84	60.00
E-85	76.00	K-85	72.00
E-86	76.00	K-86	52.00
E-87	72.00	K-87	52.00
E-88	60.00	K-88	68.00
E-89	56.00	K-89	64.00
E-90	72.00	K-90	52.00
E-91	52.00	K-91	64.00
E-92	64.00	K-92	56.00
E-93	56.00	K-93	52.00
E-94	76.00	K-94	44.00
E-95	60.00	K-95	56.00
E-96	56.00	K-96	60.00
E-97	68.00	K-97	52.00
E-98	60.00	K-98	52.00
E-99	64.00	K-99	52.00
E-100	52.00	K-100	44.00
E-101	56.00	K-101	56.00
E-102	60.00	K-102	48.00
E-103	60.00		
Total =	6724.00	Total =	6356.00
Average =	65.28	Average =	62.31

The Role of Mandarin Speakers' Mimicry Ability in Their Accurate Pronunciation of French

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Abstract

Language learners with higher aptitude scores are predicted to be better able to learn a foreign language than those with lower aptitude scores. Regarding pronunciation, for example, an individual's mimicry ability is revealed to be a significant predictor regarding their accuracy in the pronunciation of a foreign language (Hinton, 2013; Purcell & Suter, 1980). Nevertheless, the effect of other variables should not be ignored. For instance, greater foreign language experience is predicted to be able to enhance language learners' foreign language proficiency (Flege, 1995). However, none of the previous studies have investigated whether language learners with different language aptitudes perform differently when presented with the same amount of foreign language experience. The present study, therefore, investigated L1-Mandarin speakers' mimicry ability as an individual difference that predicts their accuracy in the pronunciation of French after receiving the same amount of French instructions. 44 adult L1-Mandarin speakers' mimicry ability was tested before they were exposed to French classes. Their French pronunciation was also tested three times after the mimicry test. The tests were conducted at the end of the 4th month (test 1), the 10th month (test 2), and at the end of the 16th month (test 3) following the mimicry test. The results confirm

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that their mimicry ability displayed a significant effect on their accuracy in French pronunciation in test 1 and test 2, but did not show a significant effect on their performance in test 3.

Keywords: aptitude, mimicry ability, accurate pronunciation, foreign language experience

1. Introduction

Language learners' accurate pronunciation of a foreign language has been shown to be influenced by a wide range of variables, such as L1 knowledge, onset age of learning the foreign language, gender difference, etc. (Piske, MacKay, & Flege, 2001). However, while some of these variables can be controlled, others are not within the controllable range. For instance, as an inborn ability, language learners' aptitude in the learning of a foreign language may not be controlled (Piske et al., 2001). Language learning aptitude is defined as how well an individual can learn a foreign language in a given period of time and under certain learning conditions. It is found to be relatively stable once a person matures (Parry & Stansfield, 1990). Language learners with higher degree of aptitude are predicted to be able to do better in foreign language learning in all circumstances than those with a lower degree of aptitude (Robinson, 2005).

Language learning aptitude can be assessed with relevant tests, such as Pimsleur's Language Battery (Pimsleur, 1961) and that of Carrol and Sapon (1957). The majority of the tests assess language learners' memory, sensitivity to grammatical distinctions and phonetic coding¹, all of which affect their capability in the acquisition of a foreign language as a whole. Language learners' mimicry aptitude has also been found to be a significant and independent predictor for their accurate pronunciation of a foreign language (Hinton, 2013; Purcell & Suter, 1980). For instance, in Purcell and Suter's (1980) research, mimicry ability was only secondary to the influence of language learners' L1 knowledge in determining the degree of their perceived foreign accent. The significant role of mimicry ability in the pronunciation of a foreign language has been further illustrated in a more recent study conducted by Hinton (2013). Two groups of participants joined the study. The first group consisted of 20 to 22 year-old Polish speakers who had been studying English as a foreign language in Poland. None of them had previously studied French. Thus their mimicry ability was tested in terms of repeating French words and phrases. Their accuracy in English pronunciation was then tested. The overall results indicated that the participants' mimicry

¹ Phonetic coding tests assess language learners' ability to recognize sounds and from association between them and their written form so that they can later be recalled (Hinton, 2013).

ability is a significant predictor for their accurate pronunciation of English as a foreign language. However, the second group's performance was much poorer than that of the first group in the accuracy test despite the fact that the two groups of participants displayed similar levels of mimicry ability. It might be argued that this discrepancy was caused by the fact that, apart from aptitude factors, other variables (such as gender difference, personalities, the ways and amount of time the learners spent in English study, etc.) may have had an influence on the participants' English pronunciation. Nevertheless, Hinton (2013) provides us with an effective method to test language learners' aptitude in the accurate pronunciation of a foreign language. This method is employed in the present study.

In addition to aptitude, there are many other factors that may influence language learners' accurate pronunciation of a foreign language. One of the most important factors would be language learners' previous experiences of learning a foreign language. For instance, Flege's (1995) Speech Learning Model (SLM) indicates that the greater L2 experience contributes to an enhancement of the learners' capability in producing L2 speech sounds. However, SLM also predicts that L2 speech learning is a long journey. It requires a large amount of native-speakers' input to be successful (Flege, 2003). Numerous experiments (e.g., Bohn & Flege, 1992; MacKain, Best, & Strange, 1981; Mortreux, 2008) have provided supporting evidence for this prediction. Nonetheless, the importance of language experience may not neutralize the significant role of language learners' aptitude in language learning as in this respect the SLM does not provide us with relevant evidence that can be relied on.

None of the previous studies have examined whether language learners of different levels of aptitude perform differently after receiving the same amount of foreign language input. The present study, therefore, aims to investigate the role of aptitude in foreign language learning. Specifically, this paper reports on a longitudinal study on the effect of language learners' mimicry ability on their accurate pronunciation of French during a period of 18 months. It explores whether L1-Mandarin speakers with varying degrees of aptitude in language learning perform differently after receiving the same amount of French language input.

2. Method

2.1. Participants

44 native Mandarin speakers volunteered to participate in the study ($M=20.27$, $SD=0.36$, 23 females and 21 males). They were the-3rd-year university students who were studying

English as required for their Bachelor's degree in China. As students who were majoring in English, they were required by the university to study another foreign language in addition to L2-English. They chose to study French as their 3rd language. Before the present study, none of the participants had any knowledge on French or ever traveled/lived abroad. They were taking French classes 4 hours per week. Their tutor was a native French speaker, who had been working in China for 12 years, and was fluent in Mandarin.

2.2. Procedure

2.2.1. Mimicry Test

The mimicry test was carried out 1 week before the participants started French classes. The testing method proposed by Hinton (2013) was employed for the present study. The participants were asked to repeat a series of words and phrases presented in unfamiliar foreign languages. The stimulus words/phrases adopted in the present study were words and phrases from Spanish and German. All the participants had previously reported that they had no knowledge on the two languages. The stimuli included 10 Spanish and 10 German words/short phrases. Each stimulus was read once by native speakers of the languages (the stimuli of Spanish were produced by a female speaker and the stimuli of German were produced by a male speaker), thus yielding a total number of 20 stimuli. The recordings of the stimuli were then cut and merged in a randomized order with 5-second interval between 2 stimuli, so that the participants could repeat each stimulus during the 5-second interval in the mimicry test.

The mimicry test was carried out in a quiet room, where the recordings of the stimuli were played to the participants on a laptop. They were asked to repeat what they heard immediately after hearing each word/ phrase. The participants were tested individually and their responses were recorded on a high quality recording machine (Roland-R03). As mentioned in Hinton (2013), the validity of mimicry test may be compromised if the participants are too shy to mimic what they hear. Therefore, in order to address this problem and to help the participants to relax and do their best in the test, they were left alone in the testing room during the performance of task, once the investigator had turned the recording device on. Moreover, they were also told that their mimicry performance would have no consequences on their studies or private life. The recordings were then transferred to the laptop.

A 5-score Likert scale was employed to assess the participants' mimicry performance (0=no attempt or totally unrecognizable pronunciation, 5=very good pronunciation). Therefore, each participant received an overall score, which was measured against a potential

total of 100. The raters were the same speakers who produced the original stimuli. They were asked to conduct the assessment individually in their own place, so that to avoid potential bias. For the raters' record, the randomized recording of their own production was sent to them together with the participants' recordings in the test. The raters were asked to assess the words of their own native language. That is, the Spanish speaker (who was also the rater) assessed the participants' mimicking of Spanish words/ phrases. Likewise, the German speaker (rater) was asked to assess the participants' pronunciation of German. The assessment results were then sent back to the investigator.

2.2.2. French Pronunciation Test

The participants' accuracy in French pronunciation was tested three times. Test 1 was carried out four months after the participants started French study, which coincided with the end of the first semester of their 3rd academic year. Test 2 was conducted at the end of the second semester of their 3rd academic year, 10 months after they started French learning. Test 3 was carried out at the end of the 1st semester of their 4th academic year, when they had been learning French for 16 months.

The participants were asked to do a read-aloud task in the tests. 20 French items employed in Pimsleur (1961) were adopted as the stimuli in the present study (see Appendix I). Although Pimsleur (1961) is a quite old paper, the stimulus materials used in it could still be useful, because the 20 stimulus items represent some of the most significant elements of French pronunciation. Specifically, 12 different French vowels were embedded in the first 12 items. In addition, the pronunciation of the silent *h* could be tested with item 14. Oppositions of *Jean/Jeanne*, *bon/bonne*, *marin/marine*, *fille/ville*, *pays/soleil*, *jeu/joue*, which were found to be difficult for non-native French learners to learn, were embedded in items 15-20 (Pimsleur, 1961). In each test, the participants were asked to read the stimuli three times each. They were given enough time for preparation. The recording began when the participants said they were ready. None of the participants reported that there was an item that they did not know. Their readings were audio-recorded with a high quality recorder (Roland-03), and then transferred to a laptop.

The participants were also asked to complete a questionnaire at the end of each test (see Appendix II). The aim of the questionnaire was to investigate the influence of relevant variables, if any, on their pronunciation performance (i.e. the amount of time spent in French reading, writing, listening, and speaking in their spare time). When the tests were finished, each participant's recordings in the three tests were put into one sound file. The sound files and the texts of the stimulus words were then sent to 6 native

French speakers¹ (3 females, 3 males) for assessment. The raters were asked to assess the participants' pronunciation with a 5-score Likert scale (0= totally unrecognizable pronunciation, 5= native-like pronunciation). Given that each sentence was read three times by the individual participants, the raters were asked to choose the best version of pronunciation during their assessment. In order to avoid the potential for bias, the raters were not informed that the recordings were from three different tests. The raters did the assessment separately in their own place, and then sent the assessment results to the investigator. The individual participants' scores in each test were then summed up and divided by 6. Therefore, each participant received an overall score out of 100 in each test (20 sentences*5 scores*6 raters/6). The reliability and coherence of the raters' assessments was tested with *Cronbach's Alpha*. The results indicated that the raters' assessment was highly reliable and coherent ($\alpha \geq 0.90$).

3. Results

3.1. Mimicry Test Results

The participants' mimicry scores ranged from 40 to 78 out of 100 ($M=64.42$, $SD=0.96$). 31 out of 44 participants' mimicry scores were between 50 and 70. Six of the remaining participants' mimicry scores were above 70 (males=4, females=2). The remaining seven participants' mimicry scores were below 50 (males=3, females=4). An interesting finding was that, according to the data obtained from the questionnaire, the six participants whose mimicry scores were over 70 were found to have better academic performance in their L2-English study. Four of them had won several prizes in English speech competitions held by the university and/or the government. Nonetheless, the seven participants whose scores were below 50 had medium academic performance in their English tests in the last 2 years. The findings were in accordance with those presented by Hinton (2013). That is, there were wide differences among individual participants regarding their mimicry ability. Similarly, in the present study, those who were assessed to have a better 'music ear' in Hinton (2013) also reported to have better academic performance in the current study, such as winning prizes in recitation competitions.

In addition, the difference of the male and female participants' mean scores in the mimicry test was found to be statistically insignificant in the present study ($p>0.05$). In Hinton's (2013) study, however, the female participants were revealed to have better mimicry

¹ The raters were paid to do the assessment. They were teaching French in a vacation school in China.

performance than their male counterparts. The reason for this discrepancy might have been caused by the comparatively smaller sample size in Hinton (2013) compared to that of the present study.

3.2. French Pronunciation Test Results

In test 1, the participants' scores ranged from 44 to 82 ($M=62.46$, $SD=1.90$). 34 of the participants achieved the accuracy scores between 60 and 70. Five participants' scores were above 70. Three participants received the score of 66, 66 and 62, respectively. The other two participants' pronunciation performance scores (44 and 46 respectively) were not satisfactory. This low level of performance was a reflection of the two participants' mimicry test scores, which in both tests were 40. However, for the majority of the participants, it seems that the better they did in the mimicry test, the higher the accuracy scores they received in the pronunciation of French in test 1. In order to illustrate this observed phenomenon, the participants' scores in the mimicry test and pronunciation test 1 were coded into SPSS for a correlation test. The results of this test confirmed that their mimicry ability was significantly correlated with their accuracy in the pronunciation of French in test 1 ($r=0.89$, $p<0.05$). In other words, the participants' better mimicry ability was associated with more accurate French pronunciation.

The findings in test 2 were similar to that in test 1. Specifically, the participant's scores ranged from 52 to 84 ($M=68.12$, $SD=1.67$). The majority of the participants' scores were between 50 and 70 ($n=32$). Nine participants' accuracy scores were above 70, with the participants presenting scores above 70 in the mimicry test. The remaining three participants' French pronunciation scores were 52, 56 and 56, respectively. Their mimicry scores were 40, 40 and 48. The participants' scores in test 2 and the mimicry test were again coded into SPSS for a correlation test. According to the SPSS test results, the participants' mimicry scores were found to be significantly correlated with their pronunciation performance results in test 2 ($r=0.76$, $p<0.05$).

In contrast, the findings in test 3 were totally different from the findings in the two previous ones. The participants' scores in the pronunciation of French ranged from 68 to 94 ($M=76.46$, $SD=0.93$). 28 out of 44 participants' scores were between 70 and 80. Ten participants received the scores between 80 and 90. Another four participants' scores were above 90. Among the four participants, two scores were top in the mimicry test. Another two of them, however, had medium performance in the mimicry test. The remaining two participants' scores were both 68 despite the fact that their mimicry scores ranged in the medium level among all the participants (60 and 64, respectively). The correlation test

findings, therefore, indicated the correlation between their mimicry performance and French pronunciation in test 3 was insignificant ($r=0.39$, $p=0.07$).

According to the results, the participants' mimicry may have exerted an influence on their French pronunciation in the first 10 months of French study. However, this effect seemed to be weakened, or neutralized following the increased experience of French study. This speculation may be further illustrated by their improved accuracy in French pronunciation across the three tests. It was found that their improved scores from test 1 to test 2, and from test 2 to test 3 were both statistically insignificant ($p>0.05$). Their improvement from test 1 to test 3, however, was revealed to be statistically insignificant ($p<0.05$). These findings may therefore have provided supporting evidence for SLM's prediction, which argues that greater language experience facilitates language learners' acquisition of the target language (Flege, 1995).

The data collected with the questionnaires explored the influence of other relevant variables on the participants' performance in the three tests. All the participants expressed some degrees of interest in French study. The participants were all Mandarin speakers who started French study at the same or similar age and were taught by the same teacher, with the same textbook, in the same language environment. Therefore, the influence of these variables was not taken into consideration. Instead, the amount of time and the ways that the participants spent in French study were investigated. Specifically, their total amount of time spent in French reading, speaking, listening and writing was calculated from the beginning of French study in test 1, test 2, and test 3. It turned out that during the term time, the majority of the participants read and listened to the dialogues/vocabulary items on the textbook for about 0.5-2 hours per week. They also spent an additional 0.5-2 hours in doing the exercises in the textbook in terms of writing. During the summer/winter holidays, a few of the participants reported that they did not spend any time in French study. The rest of them spent about 0.5-5 hours per week in French reading, listening, speaking, and writing, depending on individual differences.

Repeated-measure ANOVA was carried out to investigate whether the amount of time that the participants spent in reading, speaking, listening, and writing French, and the gender difference had a significant influence on their pronunciation performance. The findings of this test confirmed the amount of time that the participants spent in reading and listening to French had a significant effect on the participants' improved accuracy in the pronunciation of French ($p<0.05$). Specifically, those who spent more time in reading and listening French

were found to have gained significantly more improvement than those who spent less time in doing so. The amount of time they spent speaking¹ and writing. Additionally, gender difference was found to be statistically insignificant for their French pronunciation ($p>0.05$).

4. Conclusion

This study examined the influence of language learners' mimicry ability on their accurate pronunciation of a foreign language. L1-Mandarin speakers' mimicry ability was tested before they started French language studies. Their accuracy in French pronunciation was tested three times over a period of 16 months. During this period, they received the same amount of French input in classes, though there were individual differences in the amount of time spent in French learning after class. Their mimicry ability was revealed to be a significant predictor of their French pronunciation in the first 10 months of French study. Nevertheless, language experience seemed to have weakened, or its influence neutralized in the longer term, as confirmed by the fact that their French pronunciation was insignificantly correlated with their mimicry ability after 16 months of French study. Therefore, language learners' mimicry ability might be significant at the beginning stage of their acquisition, specifically pronunciation, of a foreign language. In a long run, however, their mimicry ability may not be a significant factor regarding their accurate pronunciation of a foreign language. In addition, it was found that reading and listening to the target language may facilitate the learner's accurate pronunciation.

The present study suffers from some limitations. For instance, there might be some deficiencies regarding the mimicry test. As mentioned by Hinton (2013), there might be a potential bias resulting from the fact that the participants may be too shy to mimic the words/phrases. However, to minimize the potential bias, the investigator was not present when the participants were doing the mimicry test. Nevertheless, it is still uncertain as to what extent the tested results accurately showed the participants' mimicry ability. Therefore, future in-depth studies in this field may provide some improvement in mimicry tests.

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¹ The participants' amount of time spent in French speaking was very similar from one to another. This was because they only had the chance to speak French in French classes.

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Appendix I

Stimuli for mimicry test:

Spanish: gracias, nosotros, Buenos días, Estoy bien, Mucho gusto, Por favor, Hasta luego, el aeropuerto, la iglesia, la hospital

German: Einverstanden, Das ist gut, Kein problem, richtig, Bitte schön, Auf Wiedersehen ,
Chinesisch, Schlecht, Fünfzehn, Hundert

Stimuli for pronunciation test (adopted from Pimsleur, 1961):

1. Il est fou.
2. Il est beau.
3. Nou somme dans la salle.
4. J'ai vu le bébé cet été.
5. Qu'est-qu'il a bu?
6. Regqrdez le feu.
7. J'en ai neuf.
8. Il me le dit.
9. Ce train est lent.
10. Qu'est-ce qu'ils font?
11. Servew le pain.
12. Paris est grand.
13. Il est à la maison de son oncle.
14. Quelle jolie harmonie!
15. Où est Jean? / Où est Jeanne?
16. Le vin est bon. / La viande est bonne.
17. Mon frère est marin / Il est dans la marine.
18. J'ai vu la file. / Elle est en ville.
19. Quel pqys! / Il yq du soleil!
20. C'est un jeu. Je joue.

Appendix II

Questionnaire:

Name: Age: Gender : Mather tongue:

1. What were your scores in the last 2 academic years' final English exams?

2. Have you ever joined any English competition? If yes, have you won any prize?
3. During the academic term time/holidays, do you have any chance to French on a daily basis? If yes, tell the details.
4. During the time between last test of the experiment (mimicry test/test 1/test 2) and now, on average, how much time did you spend in French reading, speaking, listening, writing? And in which ways?

Days per week:

Hours per day:

Degree of Foreign Accent in English Production by Japanese, Thai and Italian Adults and Children

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Abstract

This study evaluates the influence of age (adult vs. child), and native language (L1) on language learners' degree of foreign accent in L2 pronunciation. Age-matched groups of native Japanese (NJ), native Thai (NT), native Italian (NI) and native English (NE) adults and children's production of English sentences was tested with a delayed repetition task (Flege, 1995). Their English production was recorded during the test. The overall degree of perceived foreign accent of the participants' production was assessed by native English listeners with a 5-score scale. According to the results, (1) all the NJ, NT and NI children, who had arrived UK as young children and had been exposed in English-medium schools for about 4 years, were found to have detectable foreign accents; (2) the NJ, NT and NI children received significantly higher ratings than the NJ, NT and NI adults did; (3) there was not a significant difference among the NJ, NT and NI children's assessed results; (4) the NI adults received significantly higher ratings than the NJ and NT adults. The findings are in accordance with the traditional view of age-based constrictions on L2 learning (e.g., Oyama, 1979). Moreover, L1 difference is found to be a significant variable affecting the adult participants' variant degree of foreign accent, yet to be insignificant for that of the child participants of different L1 backgrounds.

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Keywords: foreign accent, L2 pronunciation, age difference, L1 influence

1. Introduction

Second language (L2) learners are frequently found to have a detectable foreign accent even after learning/using the target L2 for years. Studies on L2 acquisition revealed that there are many factors affecting L2 speakers' degree of foreign accent, such as the amount of L2 use, motivation, gender difference, etc. (Flege, 1995). The most intensively studied factors would be the influence of the learners' native language (L1) and their age (particularly about the age of first exposure to an L2 (onset age of L2 study, OA thereafter) (see Piske, MacKay, & Flege, 2001, for review). The present study aimed to provide additional insights into the influence of the two factors on the degree of L2 speakers' foreign accent.

1.1. L1 Influence and Foreign Accent in L2 Pronunciation

The foreign accent, or non-native pronunciation of an L2, is frequently attributed to the influence of language learners' mother tongue (L1) (Flege, MacKay, Meador, 1999; Suter, 1976; Wayland, 1997). Specifically, it has been found that L2 users tend to carry the intonation, phonological processes and/or pronunciation rules from their L1 into L2 pronunciation (MacDonald, 1989). The foreign accent may be detected from segmental and/or supra-segmental characters of L2 pronunciation (de Mareüil & Vieru-Dimulescu, 2006). For instance, it has been found that tonal language speakers may bring the tonal features of their L1 to L2 pronunciation. Wei and Zhou (2002) investigated Thai speakers' problems in English pronunciation. They found that Thai students use rising tones in Yes-No questions, Wh-questions (i e. what, why, where etc.) and statements. This was explained by the fact that Thai language does not use intonation to differentiate questions and statements. In respect of segmental features, for instance, due to the lack of /l/-/ɹ/ in Japanese phonetic system, Japanese speakers of English are frequently found to have difficulty in the pronunciation of the contrast (Flege, 1995; Bradlow, Akahane-Yamada, Pisoni, & Tohkura, 1999; Schmidt, 2014). In contrast, L2-English learners, whose L1 phonetic systems contain /l/-/ɹ/, may not be so likely to have difficulty in the pronunciation of the contrast, such as Mandarin speakers (Li, 2014, 2015).

At this point, it might be tempting to assume that the degree of similarity between language learners' L1 and L2 plays a critical role regarding the extent to which they can accurately pronounce L2. A number of hypotheses and models have investigated this issue (e.g., Flege's Speech Learning model, Lado's Contrastive Analysis Hypothesis), though there

is still a debate regarding whether the similarities/differences facilitate or hinder language learners' acquisition of L2 sounds. Given that some languages share more phonetic/phonological similarities with each other than other languages, it might be tempting to speculate that L2 learners of different L1s may display differing degrees of foreign accent. For instance, both Suter (1976) and Purcell and Suter (1980) reported that in the pronunciation of English, non-native English speakers of Japanese, Persian and Thai showed significantly higher degree of foreign accent than Arabic speakers. Their native language was detected to be the most significant predictor of the participants' degree of foreign accent. Nevertheless, as discussed by Piske et al. (2001), the participants in both of the studies were not matched for other relevant variables, such as age of L2 learning, length of residence in the target L2-speaking country, amount of L2 use, etc. Thus their performance may, to some extent, be affected by factors other than L1 knowledge. Moreover, Hao (2012) investigated native English (non-tonal language) and native Cantonese (tonal language) speakers' acquisition of Mandarin (tonal language). If L1 plays such a decisive role regarding L2 speakers' foreign accent, Cantonese speakers should have performed differently from English speakers. However, it turned out that both English and Cantonese speakers had difficulty in the differentiation of Mandarin Tone 3 and Tone 4. In addition, though the contrast /l/-/ɹ/ is lacking in the Japanese phonetic system, Japanese speakers of English are neither uniformly found to have difficulty in the pronunciation of English /l/-/ɹ/, nor being incorrigible in the pronunciation of the contrast (Best, 1994). Thus, it might be controversial to view language learners' L1 as a decisive, or the sole variable that impacts their foreign accent of L2 pronunciation.

1.2. Age Effect on L2 Pronunciation

Language learners' onset age of L2 learning (OA) is traditionally viewed as a critical factor affecting their final achievement in L2 acquisition. Critical Period Hypothesis (CPH) is an early theory on this issue (i.e., Flege, 1995). CPH predicts that language learners are unable to achieve native-like proficiency level if they start the L2 learning after the end of a 'critical period' (CP) (Lenneberg, 1976; Patkowski, 1980, 1990; Piske et al., 2001; Scovel; 1969, 1988;). The reason is either attributed to the maturational changes in brain structures that are relevant to language learning (Lenneberg, 1967; Neville, Mills & Lawson, 1992; Scovel, 1969), or to the negative influence of the interaction between language learners' L1 and L2 systems (Bialystok, 1997; Flege, 1987, 1988, 1995, 1998a; 1998b; Oyama, 1979). Oyama (1979) and Flege (1995) support the general idea of CPH. However, instead of using 'critical period', they adopted 'sensitive period'. They predicted that the relationship between

OA and degree of L2 foreign accent is linear rather than being sharp near the beginning of adolescence (Flege, 1995; Oyama, 1979; Piske et al., 2001). CPH is also supported by experimental studies. For instance, immigrants who migrated from a predominantly L2-speaking country earlier in life were usually found to have better L2 pronunciation than later immigrants (Fathman, 1975; Flege, 1988; Flege & Fletcher, 1992; Flege, 1995; Flege et al., 1999).

A number of researchers have carried out further studies on this issue. It was predicted that there may be several CPs which affect different linguistic abilities (Fathman, 1975; Hurford, 1991; Long, 1990; Seliger, 1978; Walsh & Diller, 1981; also see Piske et al., 2001 for review). Regarding pronunciation, L2 learners who start an L2 learning before the end of the CP are predicted to have more native-like pronunciation than those whose first exposure to the L2 was after the end of the CP. Suggestions on the CP for L2 speech learning varied from one scholar to another, such as 6 years old (Long, 1990), 12 years old (Scovel, 1988), and 15 years old (Patkowski, 1990). Among these views, Long's (1990) view of CP as 6 years was widely supported. A number of other studies have confirmed that language learners who started L2 learning before 6 years old are much more likely to speak the L2 without a foreign accent than 'late' learners (Flege & Fletcher, 1992; Flege, 1995; Tahta, Wood, & Loewenthal, 1981).

Nonetheless, CPH is criticized by the findings from other studies. Contrary to CPH, which advocates 'the early the better', some late learners are found to have better L2 pronunciation than early learners (Snow & Hoefnagel-Hohle, 1977). For example, Snow and Hoefnagel-Hohle (1977) compared adult and child English speakers' pronunciation of Dutch words 6 weeks after they arrived in Netherland. It was found that older English children and adults were better able to imitate Dutch sounds than younger children. Studies on phonetic training also revealed that with sufficient input from native speakers of an L2, the adult L2 learners are able to achieve native-like proficiency in the pronunciation of the L2 sounds which they initially have difficulty with (Hazan, Sennema, Iba, & Faulkner, 2005; Iverson & Evans, 2009; Li, 2015). More recently, Bongaerts, van Summeren, Planken, and Schils (1997) found that Dutch speakers who started L2-English learning after 12 years old achieved the native-like accent in English speaking. More convincing evidence comes from the acoustic analysis in Birdsong (2007). Two L1-English of L2-French learners' VOT (voice onset time) fell in the range of native-like level, despite the fact that they started L2-English learning after 18 years old. Therefore, further evidence may need to be provided to examine the role of OA in L2 pronunciation.

Apart from L1 and OA, it is widely confirmed that there are a number of other factors that may have influence on language learners' acquisition of an L2, such as gender difference (Piske et al., 2001), amount of L1-L2 use (Flege, 1995), born aptitude to language learning (Li, 2014; Robinson, 2005), attitude towards L2 learning (Taylor, 1974), etc. Some of these factors are quite easily investigated. For instance, data on gender difference could be easily collected. Specifically, female learners are frequently predicted to have better L2 achievement than male learners (Asher & Garcia, 1969; Oxford, 1993), although there are exceptions to this outcome in other studies (Li, 2015). Similarly, factors such as language learners' OA of L2 learning could be collected and quantified. Other factors, however, could pose comparatively more difficulty to assessment. For example, to quantify an L2 learner's amount of L1-L2 may prove difficult. If the participant is an L1-Japanese of L2-English speaker who is studying in UK, it may seem easy to calculate how much time he/she spent in English classes. However, it would be more difficult to calculate to what extent he/she involves himself/herself in classroom activities (e.g. discussion). What if he/she sits together with Japanese group members/ desk mates? What if he/she hardly talks in classroom activities, even if he/she sits with a group of English speakers? The point here is neither to deny the influence of these factors on language learning's acquisition of L2 nor to challenge previous findings on the issue, but rather to focus on the investigation of age and L1 influences on language learners' pronunciation of an L2.

2. Method

2.1. Participants

The present study aimed to explore the influence of L2 learners' age and L1 on the degree of foreign accent in their L2 speaking. Thus, the primary criteria in selecting the participants were age and L1. Age-matched experimental groups (children vs. adults; $n=122$) of native Japanese, Thai, and Italian speakers were recruited to join the study (NJ, NT, and NI hereafter). Another 2 age-matched groups of native English (NE) speakers joined the study as the control groups (adult vs. child). The adult English speakers were the students from a University in UK. The child English speakers were from a primary school in UK. All the participants were paid to join the study. After being recruited, they were asked to fill out a questionnaire to collect their language background information. Characteristics of the 8 groups of participants are presented in Table 2.1 below. Neither the three groups of adult nor child L2-English speakers differed significantly from each other in age (adults $F(2, 61)=0.98$,

$p > 0.05$; children $F(2, 61) = 1.04, p > 0.05$) and OA (adults $F(1, 31) = 1.13, p > 0.05$; children $F(1, 31) = 0.96, p > 0.05$).

The adult NJ, NT and NI participants had been learning L2-English for about 8-10 years in their home countries. They were studying in London and York for Master's degree/ Bachelor's degree. They had stayed in UK for around 2 years¹. Except for the experience of studying in UK, none of them had lived abroad before. Four NJ and three NI participants lived with local English families (homestay). The rest of them reported that they shared flats/houses with other international students, which included native and non-native English speakers.

The child NJ, NT and NI participants were recruited from the same local international primary schools in London. They started L2-English learning since they came to UK with their parents at the age of about 6. Thus, they had been learning/using English as an L2 for about 4 years. During this period of time, they received formal English instruction from the primary schools. The dominant language was their mother tongues when they were at home, while it was English when they were at school.

Table 2.1 Participants' language background (M: male; F: female)

¹ Regarding abroad experience, the majority of the adult Japanese, Thai and Italian participants had only been to UK. Some of them (n=11) had traveled to other countries, but only for short trip of few days. Thus, only the period of time that they stayed in UK was counted.

Participants	Number	Age range	OA of L2-English learning	Average years of L2-English learning	Length of residence in UK (in average)
NJ adults	14 (F=7; M=7)	22-26 (mean=22.41)	mean=12.42; df=0.36	10.26	2.03
NJ children	15 (F=8; M=7)	9-12 (mean=10.43)	mean=6.13; df=0.92	4.44	4.07
NT adults	16 (F=8; M=8)	21-26 (mean=23.85)	mean=12.68; df=0.77	8.91	1.91
NT children	16 (F=8; M=8)	11-12 (mean=11.44)	mean=6.91; df=0.31	4.28	4.15
NI adults	15 (F=9; M=6)	23-25 (mean=24.14)	mean=12.69; df=0.73	10.14	1.86
NI children	16 (F=7; M=9)	10-12 (mean=10.92)	mean=6.32; df=0.40	4.54	3.95
NE adults	14 (F=7; M=7)	22-26 (mean=23.98)	N/A	N/A	N/A
NE children	16 (F=7; M=9)	10-12 (mean=11.22)	N/A	N/A	N/A

2.2. Stimuli and Task

The delayed repetition technique developed by Flege (1995) was employed to elicit the participants' production of English sentence. The stimuli were adopted from that in Flege et al. (2006) (see Appendix). A male and a female native English (NE) speaker were asked to produce the stimulus sentences. The NE speakers were both mid-aged English teachers from a middle school in York. They were born and grew up in Leeds and London. Their production was recorded with a high-quality recorder (Roland-R5) in a sound treated booth. Each trial of the stimulus sentences was produced with the sequence of question-answer-question, such as:

Question (male voice): How are you today?

Answer (male voice): I'm fine, thank you!

Question (male voice): How are you today?

Following the third sentence in each trial there was a 15-second delay, which allowed the participants to produce the target sentences. The purpose of interpolating a 'question'

between the target sentence and its repetition was to avoid direct imitation from auditory memory (Flege et al., 2006; Flege, 1995). Each trial was repeatedly presented three times in a randomized order, thus yielding a total number of 24 trials.

The participants were tested individually in a quiet room. The stimuli were presented over a loudspeaker using a laptop at a self-selected comfortable volume level. An example was given to the participants, before being recorded, to illustrate how to do the task. Their production was audio-recorded with a high-quality recorder (Roland-R5), and was then transferred to the laptop in waveform audio.

2.3. Foreign Accent Ratings

Another 10 NE speakers (6 female, 4 male; mean age=22.75) were paid to do the rating. They were university-level students, who were studying Linguistics for their Bachelor's degree or Master's degree at different Universities in UK.

The sound files of the participants' recordings were sent to the raters via AirDrop, so they could do the assessment individually in their own place. They were given as much time as they need to finish the rating. The raters were asked to assess the participants' degree of foreign accent for each trial using a 5-Likert scale (5: no foreign accent/ native-like English accent; 0: very strong foreign accent). Given that there were 24 trials produced by each participant, each participant received an overall score out of 120 (24 trials * 5 scores). To avoid potential bias, the raters were not told what the participants' L1s were. Moreover, the file names of individual participants' recordings were labeled with random numbers (from 1 to 122) rather than with their real names. After the rating was finished, the assessment results were sent back to the investigator. The final scores of the participants' perceived degree of foreign accent were the mean scores from the 10 raters.

To test the reliability and coherence of the assessed results received from the raters, individual participants' received scores of each trial from the 10 raters were input in SPSS for *Cronbach's Alpha* test. As a result, the assessment scores were highly reliable and coherent ($\alpha \geq 0.90$). Moreover, all the NE participants' productions received full scores (120). Thus, the results were reliable.

3. Results and Discussion

The scores of the adult and child NJ, NT as well as NI speakers' degrees of foreign accent are shown below. All the NE participants whose production was assessed to be native are not included in the results shown.

Figure 3.1 The NJ, NT and NI participants' assessed results.

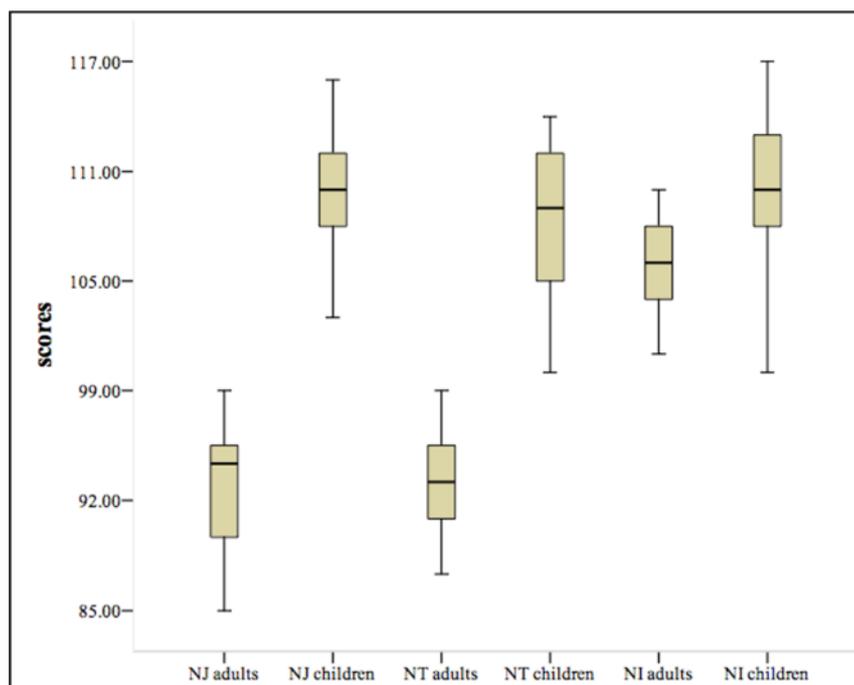


Table 3.1 Descriptive statistics of the NJ, NT and NI participants' production performance.

Participants	N	Minimum	Maximum	Mean	Std. Deviation
NJ children	5	103.0	116.0	109.67	3.90
NJ adults	4	85.00	99.00	92.86	4.28
NT children	6	100.0	114.0	108.13	4.16
NT adults	6	87.00	99.00	93.00	3.18
NI children	6	100.0	117.0	111.06	4.20
NI adults	5	101.0	110.0	105.67	3.11

As can be seen from Figure 3.1 and Table 3.1 above, none of the participants of the experimental groups received full scores matching the NE participants. In other words, all the NJ, NT and NI participants' pronunciation had a detectable foreign accent, though to varying degrees. At first glance, this finding seems to be in odds with the CPH, which advocates that L2 learners are able to achieve-native like proficiency level if they start an L2 learning before the end of the Critical Period (CP) (Lenneberg, 1976; Scovel; 1969, 1988; Patkowski, 1980, 1990; Piske et al., 2001). As mentioned in section 2, the child participants' OA of L2-English learning was around 6 years old. Their OA was either far before the end of the CP (Patkowski, 1990; Scovel, 1988), or at the edge of it (Long, 1990), depending on the version

of CP limitation. In either case, the child participants' performance can hardly provide supporting evidence for CPH. However, CPH may find its stance if we look at the adult participants' performance. As displayed in Table 2.1, the adult participants' OA of L2-English learning was around 12 years old. If we take Long's (1990) version as the criteria, in which the end of the CP is 6 years old, the adult participants' OA was far beyond the end of the CP. At this point, their unsatisfying performance may have provided some supporting evidence for CPH. However, if the end of the Critical Period for the acquisition of L2 pronunciation is defined as 12 years old (Scovel, 1988) or 15 years old (Patkowski, 1990), the adult participants' performance would be in odds with the claim of CPH.

The second finding was that the NJ children had much better pronunciation than the NJ adults in terms of minimum score, maximum score and mean scores, which were statistically significant ($p < 0.05$). Similarly, NJ children received significantly higher scores than NJ adults ($p < 0.05$). In contrast, the NI adults and children performed similarly in terms of minimum and maximum scores, despite the fact that the NI children's mean score was significantly higher than that of the NI adults ($p < 0.05$). On the whole, the finding indicated the child groups performed significantly better than the adult groups of the same L1. This outcome is contrary to the findings in Olson and Samuels (1973) and Snow and Hoefnagel-Hohle (1977), in which the late learners had better L2 pronunciation than the early learners. Nonetheless, the participants in Snow and Hoefnagel-Hohle (1977) were tested only six weeks after arrival in Netherland. The experimental groups of the present study, however, had resided in the target L2 community (UK) for about 2-4 years. The comparatively longer length of residence in UK may, to some extent, have affected the study participants' degree of foreign accent. Moreover, the task employed in Snow and Hoefnagel-Hohle (1977) seems more likely to test the participants' imitation ability rather than accuracy of pronunciation - they were asked to imitate Dutch sounds directly. In the present study, however, a delayed repetition technique was employed to avoid direct imitation.

This finding may seem to have provided supporting evidence for the traditional view on L2 learning - the earlier, the better (Flege, 1995; Piske et al., 2001; Oyama, 1979). Results from ANOVA also indicate that the age difference (adults vs. children) displayed highly significant effect on the NJ participants ($F(1,27)=122.48$, $p < 0.001$), NT participants ($F(1,30)=133.34$, $p < 0.001$), and NI participants ($F(1,29)=10.56$, $p = 0.03$). Nevertheless, the child participants' better pronunciation may also be attributed to the fact that they had been staying in UK about 2 years longer than the adult participants. Further ANOVA analysis illustrated this speculation. That is, the participants' length of staying in UK displayed a

highly significant effect on their degree of foreign accent ($F(1, 51)=103.24, p<0.001$). In fact, the length of residence was previously revealed to be another factor that could have significant influence on language learners' achievement of L2 study (e.g., Piske et al., 2001). However, it is important not to neglect the fact that the adult participants had been learning English for about 9-10 years, while the child participants had only been learning English for about 4 years. It seems comparatively more L2 learning experience did not benefit the adult participants in relation to the degree of foreign accent. Results from ANOVA also confirmed that the years of English learning was insignificant for the participants' degree of foreign accent ($F(1, 51)=0.61, p=0.074$).

Another interesting finding from the study was that the difference among the child NJ, NT and NI groups was statistically insignificant ($p>0.05$). As shown in Table 3.1, the NJ, NT and NI children's mean scores were quite similar. This may be because they were from the same school, so they are likely to have received the same/very similar ways and amount of L2-English input at the school. Moreover, apart from the L1 difference, the child participants had many similarities concerning their language background - they all had been learning L2-English for about 4 years, and had been living in UK for about 4 years; their OAs of L2-English learning were also similar (around 6 years old). At this point, it seems that their L1s did not display a significant effect on their degree of foreign accent in L2-English speaking. Results from ANOVA also indicate that L1 difference was insignificant for the child groups' pronunciation performance ($F(2, 44)=0.95, p=0.39$). This finding seems to be at odds with that in Suter (1976) and Purcell and Suter (1980), in which the participants with different L1s pronounced English with different degrees of foreign accent. This difference has resulted because the participants in Suter (1976) and Purcell and Suter (1980) were not matched in age, OA, length of L2 learning, etc. The participants of the present study, however, had matched ages, OA of L2-English learning, length of residence in UK. Given that none of the child participants achieved native-like English proficiency level, the influence of their L1s on their L2s may have also played a significant role.

For the adult groups, the ANOVA analyses indicated that L1 was highly significant for their pronunciation performance ($F(2, 42)=64.86, p<0.001$). Specifically, the adult NI participants received significantly higher scores than the adult NJ and NT participants ($p<0.05$). The difference between the adult NJ and NT participants was also revealed to be statistically insignificant ($p>0.05$). These findings are similar to those in the studies of Suter (1976) and Purcell and Suter (1980). That is, due to the influence of L1, L2 learners with different L1s may speak an L2 with different degrees of foreign accent. According to the

results, in terms of pronunciation, the NJ and NT adult participants seem to be negatively affected more by their L1s than the NI participants. However, as was the case with Suter (1976) and Purcell and Suter (1980), the adult participants of the present study were not matched in some aspects. For instance, it was not known whether they have the same/ similar English proficiency level(s). Considering that they were living and socializing with different groups of people, it was likely that some participants had more opportunities to speak English in daily life than others. Moreover, other variables, such as attitude and aptitude in L2 learning were not investigated. These issues could be regarded as a limitation of the present study.

Moreover, in previous studies, female learners have usually been predicted to have better performance than male participants in L2 study (Asher & Garcia, 1969; Oxford, 1993). In the present study, however, gender difference was neither revealed to be significant for the adult participants ($F(1,23)=1.14, p=0.38$) nor for the child participants' pronunciation performance ($F(1,31)=0.85, p=0.62$). Due to the lack of further investigation on the influence of other relevant factors, it was not clear what led to these results.

4. Conclusion

This study investigated the influence of language learners' L1 and age on their degree of foreign accent in L2 pronunciation. Age-matched child and adult groups of Japanese speakers, Thai speakers as well as Italian speakers' L2-English pronunciation was tested. According to the results, all the adult participants were found to have obvious foreign accent, despite the fact that they had been learning English for about 9-10 years, and had been staying in UK for about 2 years. L1 difference was revealed to be a significant factor that affected their degree of foreign accent. The adult groups' unsatisfying performance may be attributed to the fact that they started L2-English learning after the end of the Critical Period. In contrast, the child groups received significantly higher scores than the adult groups. Nonetheless, none of the child participants' pronunciation was assessed to be native-like, despite the fact that their OAs of L2-learning were before the end of the Critical Period. An interesting finding was that there was not a significant difference among the child NJ, NT and NI participants' ratings, yet the adult NI participants received significantly higher scores than the adult NJ and NT participants. According to this finding, it appears that adult L2 learners with different L1s are likely to have differing degrees of foreign accent, yet child L2 learners may not. However, due to the lack of further investigation, it was not clear whether this

differential was caused by age difference only or other relevant factors (e.g., the amount of L1-L2 use). This is a limitation of the present study, which should be further investigated in future.

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Appendix.

Stimulus sentences for the task of delayed repetition (assessed from Flege et al., 2006).

Questions	Answers
1. How are you today?	I'm fine, thank you.
2. What time is it?	It's now ten o'clock.
3. How much does it cost?	It costs five dollars.
4. Where did the children go?	They went to school.
5. Where did the man go?	He went to work.
6. What did he drink?	He drank a glass of water.
7. What did the girl eat?	She ate a sandwich.
8. What did you read?	I read a good book.

The Concept and Blended Learning Models of Engineering Students when Learning a Foreign Language

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Abstract

In this paper, the comparison of blended learning with a traditional system of education has been performed. The advantages and disadvantages of traditional learning have been analyzed. The drawbacks of the traditional classroom-based system of learning have been identified. It has been concluded that the drawbacks of traditional learning can be successfully eliminated when a blended form of learning is used. The views of domestic and foreign researchers on the notion of blended learning are considered in the article. Various blended learning models and methods for their classification have been discussed. Blended learning is considered as an effective form of teaching engineering students when studying a foreign language. The application of blended learning models in the educational process is represented. On the basis of the experiment and the questionnaire, the advantages of blended learning were revealed. In future, it is planned to introduce other models of blended learning to optimize and improve the process of learning a foreign language of engineering students.

Keywords: traditional learning, blended learning, models of blended learning, e-learning

1. Introduction

National Research Tomsk Polytechnic University is one of the largest leading Russian universities, which enters the number of the five best technical universities in the country. One of the TPU goals is its formation and development as a research world-class university. Therefore, in recent years the integrated program of learning has been introduced. Within this program a variety of electronic educational resources are effectively used in the educational process of the university. The program includes a set of measures aimed at providing students with modern electronic educational resources (EER), with their dynamic upgrading and updating.

The concept of blended learning has been actively introduced in TPU since 2014. The objectives of developing this type of teaching at the University are (Regulations of e-learning in Tomsk Polytechnic University, 2014):

1. ensuring the competitiveness of the University on the modern market of educational services;

2. creating favorable conditions for the promotion of the University in the world university rankings;
3. developing the effective competitive educational modules and programs;
4. improving the quality of education;
5. expanding the contingent (including the number of people with disabilities and foreign students through the use of accessible electronic environment and flexible learning conditions).

Blended form of education is a priority at the University as it allows to create not only an integrated electronic information and educational environment on the principles of smart-education, public educational resource bank focused on personal characteristics of students, but also makes it possible to organize e-learning based on unique educational programs of a world level, organize a cooperation with Russian and foreign universities in the field of blended learning and develop learning and methodological support of the educational process.

To achieve these goals, TPU has formed specialized structures for the construction and administration of the environment of electronic educational resources management, their production and introduction into the educational process. All developed electronic educational resources are put in the university LMS (Learning Management System) to organize centralized management of the educational process.

The subsystem, built on the basis of popular LMS Moodle, has been integrated as an electronic educational resources bank into the information and educational environment of Tomsk Polytechnic University. This electronic platform is actively used by many teachers of TPU for teaching various disciplines, including foreign languages (Daneykina, 2013). As a result, each student, to one degree or another, uses electronic educational resources in his learning process.

On the other hand, the educational potential of blended learning appears to be underestimated by many students and teachers who stick to classroom forms of interaction and seem to be unaware of its advantages. Therefore, the present research aims at identifying advantages and possible drawbacks of blended learning and estimating the efficiency of blended learning technology as a means of achieving the above-mentioned objectives. The findings we present in this article can be taken into account by teachers of any university trying to achieve the same goals.

2. Research methodology

2.1. Research Objectives

Our research objectives are as follows:

- To define the concept of blended learning.
- To compare blended learning with traditional educational methods and identify possible advantages of the method.
- To identify pedagogical potential of blended learning use in higher education.
- To identify possibilities, advantages and disadvantages of blended learning and its use in teaching students at the university.

2.2. Research Methods

The analysis of articles and monographs on blended learning and its educational potential served the theoretical and methodological basis for our research. An opinion poll was conducted to find out the students' attitude toward blended learning in the educational process and to identify advantages and disadvantages of mobile learning from the learners' point of view.

3. Literature Review

For centuries, higher education was dominated by traditional learning. In the scientific and educational literature, there are different definitions of traditional learning. First of all, the term "traditional learning" implies class-and-lesson learning, developed in the 17 century on the principles of didactics presented by Comenius (1939). Zimnaya (2000) describes traditional learning as distance learning based on the principle of consciousness, intentionally uncontrolled, built according to disciplinary and substantive principle, non-context (in system of higher education - without intentional simulation of future professional activity in the course of educational activity). In the pedagogical dictionary, this term is interpreted as follows: traditional learning is learning, in which the work of a teacher is focused primarily on the transfer of knowledge and modes of action transmitted to students as a finished product and designed for reproducing mastering; the teacher is the only initiative participant of the educational process. Traditional learning is mainly of reproductive character (<http://didacts.ru/dictionary/1057/word/tradicionoe-obuchenie>).

Based on the definitions given above, it can be concluded that, the aim of traditional education is the transmission of accumulated knowledge and experience for their application in key activities (Demianenko & Ermakova, 2012). A compulsory element of traditional learning is a lesson where the teacher always plays a central and active role in the learning process. His task is to present educational information and students, in turn, should demonstrate a mastered content of the learning material. The classes are held according to the schedule and a uniform curriculum and syllabus.

Let us consider the advantages and disadvantages of traditional learning. The undoubted advantage of traditional learning is the ability to quickly provide students with the knowledge of fundamentals of science and samples of activity modes. Moreover, traditional learning contributes to lasting mastering of knowledge and rapid formation of practical skills.

Traditional classroom-based learning system, which had been formed by the beginning of the 20 century and become the base of educational process, nevertheless did not correspond to the increased volume of knowledge. It is not a coincidence that Sitarov (2014) highlights such significant drawbacks of traditional learning as averaged tempo of learning; uniform averaged volume of knowledge mastered by students; a large volume of knowledge acquired by students in the form of a finished product from the teacher; insufficient volume of independent work; lack of stimulation of cognitive activity of students and prevalence of verbal teaching methods and creating objective conditions for distraction of attention.

Today modern higher education aims at increasing the interest of the students to acquire knowledge and to intensify their efforts to acquire this knowledge by themselves. Especially in connection with the recent changes in the FSES (Federal State Educational Standard), a large proportion of knowledge acquisition is transferred to the self-directed learning of students (Petruk, 2011).

These tasks can be successfully implemented in a blended type of learning. Further, in our work, we will consider the definitions of blended learning and its models.

It is believed that the term “blended learning” began to be used with the advent of the Internet in the late 1990s. First, the term “Blended learning” appeared in the pedagogical literature in 1999 (<http://www.thefreelibrary.com/Interactive>). At first, the notion did not have a single content and the term “blended learning” involved a combination of different methods used in teaching practice. In 2006, the first book on blended learning “The Handbook of Blended Learning: Global Perspectives, Local Designs” was published. The authors of this work are American researchers, Curtis, Bonk, Charles, and Graham (2006). In this book, the term got its modern definition as "a system that combines face-to-face learning with computer-based

learning". However, blended learning had no single definition and understanding for a long time.

For example, Purnima (2002) understands the term “blended learning” as a combination of different methods of educational content delivery, such as courses based on Web-technologies, EPSS, and knowledge management techniques. She also uses this term to describe learning that combines a variety of educational activities, including full-time learning (face-to-face learning), electronic online-learning and self-study learning.

Rossett and Frazee (2003) state that, at first glance, blended learning combines the contradictory approaches, such as formal and informal learning, face-to-face communication and online-communication, and supervised actions and independent choice of the learning model. In the article “Blended learning” Clark (2003) defines blended learning as the use of classroom and e-learning.

In domestic pedagogical science, researchers also pay great attention to the problem of blended learning. Blended learning technology has become widespread in Russia since 2012 with the introduction of new educational standards, Russia's entry into the Bologna Process and other international agreements (www.rg.ru/2012/12/30/obrazovanie-dok.html). However, it is worth noting that blended learning began to be used in Russia much earlier. A lot of domestic pedagogues have long appreciated the benefits of e-learning and they extensively use distance learning technologies in their teaching practice. For example, Kurovskii (2009) writes that distance learning technologies are naturally integrated into the system of professional training of future specialists.

Russian teachers have also long been concerned with the use of blended learning in the higher education. For example, Fomina (2011) writes that in Moscow State University of Economics, Statistics and Informatics (MESI), blended learning has been used for over 10 years. The researcher defines blended learning as a technique that combines on-line learning with full-time learning, integrates traditional forms of teaching and learning with digital technologies. She claims that application of ICT tools in blended learning complement traditional learning and reduce the time spent in classroom. E-learning is an integral part of the educational process, which is changing into a new qualitative state due to the mutual influence and integration of traditional and e-learning.

Another teacher Fandey (2012) offers a “working” definition of blended learning, based on a synthesis of interpretations of the notion under consideration. According to this definition blended learning is a combination of different elements of full-time and distance-learning in which one form is the basic depending on the preferred model. Bondarev (2012)

defines blended learning as a combination of the advantages of traditional educational form-factor and the advantages of distance technologies. In his opinion, blended learning is an effective way to deal with discrepancy of the society needs and the willingness of modern higher education to satisfy them.

Despite different interpretations of blended learning notion, foreign and domestic researchers have about the same opinion on the essence of this technology. We have noted that when defining the notion of blended learning, domestic authors rely on the research and definitions of foreign scientists. In our opinion, this is due to the fact that Western countries were the first to study the problem of blended learning.

Summarizing the application experience of blended learning technologies in teaching practice of foreign and domestic scientists, the following components of blended learning model can be singled out in modern education:

- full-time learning is a traditional form of learning in the classroom with a direct teacher-student interaction;
- self-study work of students includes individual work of students, for example, search for information using the Internet;
- online-learning is a joint work of teachers and students online, using, for example, Internet conferences, Skype technology or Wiki, etc.

Considering all of the above, we can define blended learning as a learning system that combines the most effective aspects and advantages of classroom learning and interactive electronic or online learning; blended learning is a certain system which consists of various parts, operating in constant relationship with each other, forming a single unit.

In other words, blended learning is a combination of full-time and electronic learning. Blended learning technology allows to qualitatively change the educational process in higher education and to propel a joint work of a student and a teacher to the priority level, to personalize the educational activity of each student taking into account his cognitive needs.

Below we consider blended learning models. In the modern teaching practice, there are various blended learning models and methods for their classification. For example, the experts from Clayton Christensen Institute single out 4 blended learning models: “Rotation model”, “Flex model”, “A la Carte model”, “Enriched Virtual model” (<http://www.christenseninstitute.org/blended-learning-definitions-and-models/>). In our work we rely on the classification of the American educator Michael B. Horn, who is actively engaged in implementing the concept of blended learning in higher education

(<http://www.christenseninstitute.org/wpcontent/uploads/2013/04/Classifying-K-12-blended-learning.pdf>).

Below we present Michael B. Horn's classification of blended learning models (<http://www.christenseninstitute.org/blended-learning-definitions-and-models/>):

Face-to-Face model – in this model students receive the main part of the curriculum personally from the teacher when studying in the classroom. However, teachers may sometimes use e-learning as a supplement to the basic teaching materials. In this case, students can study at home or in a computer lab.

Rotation model – this model implies the alternation of classroom learning and e-learning, in which a student chooses an individual mode of learning (in a computer lab, at home).

Flex model - in this model most of the learning process takes place in an interactive environment. Face-to-face learning in the classroom remains available, but for small groups, or individually, when the need arises.

Online-lab – in this model, all teaching materials are presented online and learning is carried out in an online mode, but students work in a computer lab. The interaction of students and a teacher is carried out online (using pre-recorded videos, with the help of online conferences, discussion forums and e-mails).

Self-blend model – this model implies a completely individual approach; students choose for themselves online-courses from the offered variants. Most of the learning process is carried out on-line, but also students attend classroom lessons with a teacher.

Online-driver model – under this model, students work primarily in an online mode in a remote location (perhaps at home) and a visit to a classroom is not compulsory, but it is possible when the need arises.

Each blended learning model has its own characteristics. In the choice of a blended learning model, it is advisable to be guided by the goals and objectives of each particular course of study. In each of the considered models, the main components of blended learning are combined, to greater or lesser degree. Also, in the choice of a blended learning model, motivation of students, their psychological features and the level of development of information and communication competence should be taken into account.

The majority of Russian researchers support the classification adopted by foreign colleagues. For example, Bondarev (2012) believes that learning a professional foreign language can be effectively implemented within the rotation model. This model implies a regular change of modes determined by a teacher or the standard, i.e. alternating mastering of the discipline blocks using e-learning technologies (distantly) and in the framework of

traditional lectures and practical learning. Matukhin (2014) distinguishes two models of blended learning. The first model is based on a distance course, which integrates some methods of active learning implemented in classroom lessons with students. The second blended learning model is based on the distance e-learning methods, which are integrated into classroom learning.

Summarizing the ideas of Russian and foreign researchers, we can say that different models of blended learning have a number of obvious advantages over traditional teaching methods. First of all, blended learning helps to develop students' ability to plan and organize their learning activities, focusing on the final result. Students learn to make decisions, to make a conscious choice and take responsibility for it. Besides, in the framework of blended learning students develop practical skills of working in the information space. Students learn to search independently, select and analyze information, and to represent the results of their work using a variety of modern technologies. Thus, it becomes obvious that blended learning fits into the concept of modern education modernization, which is based on the introduction of new educational standards and joining the Bologna process and other international agreements.

4. Research Design

Let us now find out whether the theoretical ideas presented in the previous section can be proved by the results of practical research. Our research was conducted in TPU. The university has adopted its own classification of blended learning models, though, the elements of Michael Horn classification can be traced. In accordance with the “Regulations on e-learning in Tomsk Polytechnic University”, three models of blended learning are currently implemented in TPU: Face-to-Face model, Rotation model and Online-Driver model.

The subjects of our research were 4-year students of the Institute of Physics and Technology, TPU. In the course of work we carried out an experiment aimed at identifying the advantages of using blended learning in the process of studying professional English language by graduate students. The experiment, conducted for a semester, involved two groups of students, one of which (14 students) studied within the framework of the traditional learning and the classes in the second group (15 students) were based on “Face-to-Face model”. Both groups of students studied the Bachelor “Nuclear Physics and Technology”, specialization “Radiation safety of Man and the Environment”. Since in TPU “Professional

English Language” can only be studied by those students who successfully underwent pre-testing in English, English language proficiency in both groups was about the same. Thus, the students having English language proficiency at a level not lower than B2 (according to the Common European Framework of Reference for Languages) were selected after testing. Testing was conducted by the “Division of Language Learning Quality Assurance of TPU Students and Staff “, and it was the same for all students. Besides, the students, who successfully underwent testing, studied later “Professional English Language” as an optional subject (chosen from a number of humanitarian disciplines) i.e. having motivation to learn the language.

Classes in both groups were conducted by different teachers (Ya.V. Ermakova - in the first group, N.V. Demyanenko - in the second group). The results were assessed and jointly analyzed by these teachers. Teaching in both groups was carried out using the same textbook “English for Radiation Protection Studies”, the subject of which completely agreed with the syllabus and the module “Radiation Protection”, designed for 36 hours, i.e. for an academic semester (The syllabus of discipline “Foreign language in professional communication, 2012). The authors of the textbook are the authors of the experiment (N.V. Demyanenko and Ya.V. Ermakova)

Classes in the first group were given in the lecture rooms using a quite familiar pattern, where the teacher was the central figure of the learning process. In this case, the main sources of knowledge were the teacher and textbooks. Work experience based on this pattern showed that by the end of the semester many students (6 of 14) of this group were not allowed to get a credit because they did not cope with the program of the discipline in full. These students had to attend additional teacher consultations, conducted in the lecture rooms to pass the topics they missed and to be permitted to take a credit. It is worth noting that the students of this group were absent for a good reason (medical certificate, internships, participation in TPU official events). Since the students were motivated to learn English language there were virtually no unexcused absences. In this group, all classes were given.

Let us consider the organization of work with the second group of our experiment. According to the chosen model of blended learning, the work in an environment of electronic course involved to 30% of the time for the mastering of the discipline, namely 12 hours in accordance with the syllabus of discipline "Professional English" for the 4th-year students (The syllabus of discipline “Foreign language in professional communication, 2012).

Further we will consider the structure of the e-learning course “Radiation and Life”, which we developed and used in the experiment with the second group of our experiment. This

course was available on the electronic platform LMS Moodle. The course contained the tasks for self-study work on the module “Radiation and Life” and it was used in addition to classroom work. All tasks were performed individually at home or in a computer lab. The course was aimed to develop reading and writing skills, vocabulary and included three sections consisting of different tasks. Each section ended with a final test. Besides, the electronic course contained theoretical materials, links to additional sources of information that are useful to study the topics given in the course “Radiation and Life”.

Topics, covered in the course, agreed with the topics of the textbook “English for Radiation Protection Study” used in the classroom, so they had to be mastered within the period of time allotted to studying the relevant topic. Thus, the students had clear deadlines to do this or that task of the course. Using the forum (e-learning course tool), a student could ask the teacher all questions related to the work on the electronic platform and get advice. Monitoring of the task fulfillment was carried out by the teachers online. It should be noted that tests for formative control were also available in the course. Experience of using blended model showed that there was greater number of students (13 of 15) in the second group, compared with the first group, who fully coped with the program of the discipline. It should be mentioned that the students also missed their classes for a good reason, but they could complete all their missed assignments even taking their internship in some other cities, i.e. outside the University. All the classes, as well as in the first group, were given.

In course of the experiment, we surveyed the second group of the students to explore their views on the organization of the educational process with the elements of blended learning. 15 participants took part in the survey. The example of the questionnaire is presented below.

Dear Students!

We are asking you to take part in the survey and estimate the advantages of learning based on face-to-face model on a scale from 1 to 9 (with 9 being the most positive)

	Advantages of Learning Based on Face-to-Face Model	Grade
1	Ease of learning	
2	Availability	
3	Opportunity to study remotely (on your own, at home)	
4	Increasing interest in learning	
5	Visualization	

6	Contribution to a better understanding	
7	Opportunity to reinforce the material learnt	
8	Convenient search system and navigation	
9	Informativeness	
10	New form of organization of learning	

5. Results and Discussion

The results of the survey are presented in the bar graph below:

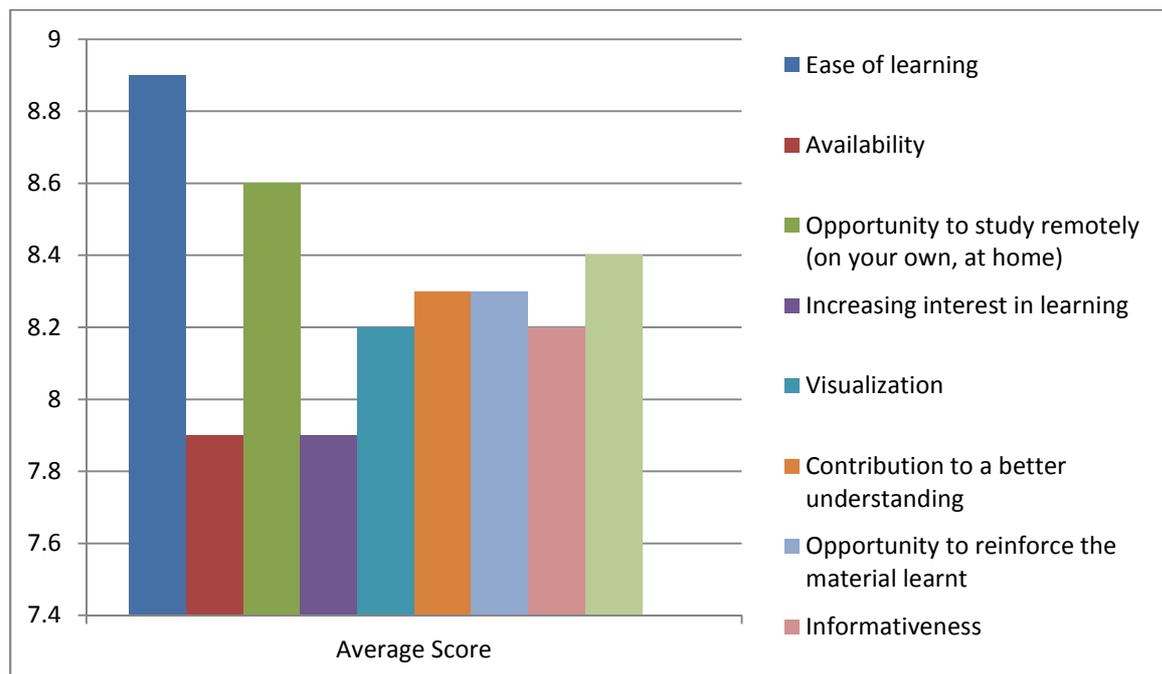


Figure 1. Students' opinion on the use of blended learning.

We can see that 100% of the students who participated in the survey estimated the process of learning a foreign language based on face-to-face model positively. Highly enough (8.9 grades) the students estimated the convenience of learning. Also, the students highly estimated the availability and opportunity to study remotely (8.6 grades). The point “New form of organization of learning” also received a high grade (8.4 grades). The students gave 7.9 grades for the point “Increasing interest in learning”. “Contribution to a better understanding”, “Opportunity to reinforce the material learnt” were highly estimated (8.3 grades)”. Convenient search system and navigation and informativeness were estimated by 8.2 grades.

The analysis of the results of the experimental study confirm the assumptions made in the literature review section and clearly show that the application of the blended model elements has a number of advantages compared to the traditional forms of education.

6. Implications

In our view, the application of blended learning can be one of the key means for solving the existing problems in the sphere of education. As a result of the application of blended learning technologies we can significantly simplify the solution to the above mentioned problems in traditional education.

The advantages of blended learning are saving classroom time and increasing possibility to study outside the classroom and revise the material at home at any time. Besides, most blended learning techniques correspond to the main principles of the individual approach in teaching. Blended learning may contribute to the development of such personal qualities as responsibility, ability to work independently, setting personal goals and meet deadlines.

7. Conclusion

In the introduction we asked the question whether implementation of blended learning can help a university to improve the quality of education and improve its position in the world university rankings. After conducting a literature review on the problems of blended learning and performing our own experimental studies we can say that the potential of blended learning in this respect is very high. Blended learning models used in educational process contribute to individualization of education, implementation of competency-based approach, and enhancing the students' motivation. Besides, blended learning can potentially solve a number of problems that arise in the process of teaching and learning under modern conditions and cannot be solved by traditional educational methods.

However, we have to admit that not all the opportunities of blended learning have been investigated and tested in real educational process. Therefore, in future we are planning to introduce other models of blended learning, adopted in TPU, to optimize and improve the process of learning a foreign language by engineering students.

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A Comparison Study on the Differences and Relationship of Quality of Life and English Learning Achievements of the NQU English Majors Graduated from Senior High School and Vocational High School

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Abstract

Due to a special policy of Taiwan Ministry of Education in higher education, National Quemoy/Kinmen University was one of the only three universities in Taiwan that admitted one class of freshmen from senior high school and one class of freshman from vocational high school. This study investigated the differences in beginning English level, progress, course achievement and quality of life between the NQU English-majors graduated from senior high schools and vocational high schools. This study also explored the relationship between the English-majors' quality of life and course learning achievements in listening, speaking, reading and writing. Four content based criterion tests and the WHOQOL-BREF assessment were used as instruments in the study. The results showed that the two tracks of students did not differ at a statistically significant level in their beginning English level, progress, listening skill, reading skill, writing skill, and three domains of their quality of life - physical health, social relationships and environment. However, the two tracks of high school graduates differed at a statistically significant level in their speaking skill and psychological domain. English major freshmen who graduated from vocational high school exceeded their

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schoolmates from senior high school in the test of speaking and in the assessment of the self-esteem facet. In addition, the analysis of the study showed that the students' scores in the listening test correlated with their physical environment, energy, and sleep. The findings could serve as important references for the course instruction, student counselling and the improvement of life environment for these two groups of students.

Keywords: Comparison study, learning achievement, quality of life, EFL

1. Introduction

The Applied English Department of National Quemoy/Kinmen University (NQU) was founded in 2002 with a freshman class recruited from vocational high schools. Originally, National Quemoy University was established in 1997 as a branch of National Kaohsiung University of Science and Technology. After six years, the branch became an independent college in 2003 as National Kinmen Institute of Technology (KMIT), still recruiting students from vocational high schools. However, through the efforts continued by the President and the faculty of the college and Kinmen County Government, KMIT was approved by the Ministry of Education to become a university in 2010, changing its status among the colleges in Taiwan from the college track which mainly admitted students from vocational high schools to one which mainly admitted students from senior high schools.

Due to this special history of NQU, NQU currently is one of the only three universities in Taiwan that have one class of freshmen from senior high school and one class of freshman from vocational high school. Because of this unique combination of student backgrounds at NQU, it was considered worthwhile to compare the current learning of these two tracks of high school graduates to gain greater insight and understanding of the characteristics and achievements of students receiving different types of English education from grades 10 to 12. It was believed that this information could benefit the future instruction of the two different groups of students.

Therefore, the researcher of this study made use of the advantages of teaching these two groups of freshmen the same grammar course in their freshman year to inquire about the differences of their learning on the same subject matter taught in the first semester of their freshman year, while they still remained distinctly different with dissimilar characteristics and abilities at the starting level in the Department of Applied English at NQU.

In addition, although abundant literature had been documented in the many factors related to learning English as a second language, such as learning attitude, learning

motivation, learning strategy, parents' economic social status, learning environment, living area, learning materials, teacher's qualifications, ability grouping, teachers' positive encouragement, parents' attitudes on children's English learning, etc. (Chan, 2004; Chien, Ching, & Kao, 2002; Cortes, 2002; Herbert, 2010; Hsiao, 2011; Huang, 2005; Lee, 2005; Li, 2004; Mantle-Bromley, 1995; Oxford & Shearin, 1994; Tang, 1989; Wang, Sheu, & Shu, 2009; Wu, 1993), the research on the relationship between quality of life (QOL) and students' learning English as a second language is still scarce. According to a study by the WHOQOL Group (Skevington & the WHOQOL Group, 2010), people's quality of life and education levels were positively related. Since the quality of students' lives may also be related to their learning, this study sought to investigate the relationship in quality of life and English learning between the students who graduated from high school and vocational high school. During the period of study while the English grammar contents were being taught to the two classes, the student's quality of life might have been a factor related to the different learning achievements of these two types of students. Therefore, while comparing the different learning achievements in beginning levels, outcomes, and progress in the two groups in the course, the researcher also sought to reveal the possible relationship between quality of life and students' learning.

Specifically, the study posed the following research questions:

1. Are there differences in the beginning English level between the two groups?
2. Are there differences in students' learning achievements between the two groups?
3. Are there differences in quality of life between the two groups?
4. Are there relationships between the student's quality of life and English learning achievements in the two groups?

2. Literature Review

In this section, the documented literature relevant to the study is presented, including the quality of life assessment, the WHOQOL-BREF, and related research on quality of life, as well as a brief review of research on learning English as a second/foreign language with the focus on the factors pertaining to second language learning achievement.

2.1. Development of Quality of Life Assessment WHOQOL-BREF and Related Research

The development of the WHOQOL instrument was prompted by the mission of the WHO professionals for advancing a holistic approach to health and health care (WHO, 1998). The instrument was developed through a collaborative work by experts in assessments,

medical professionals, and patients in different cultural settings. For several years, the development team collected 1800 questions/items, proposed by the coworkers of the development group in different cultural settings, then reduced them to 236 questions that constructed 29 facets from the complex concept of quality of life. After field trials, pilot tests, and panel discussions, the instrument was finalized to contain 100 items for measuring the four domains of quality of life—physical, psychological, social and environmental (WHO, 1998).

The WHOQOL-BREF was the abbreviated version of the WHOQOL-100. It was developed for the use in situations where a short questionnaire was more appropriate due to the time limitation or purpose of studies. The WHOQOL-BREF encompassed 26 questions, including one question on overall quality of life, one question on general physical health and 24 questions taken from the original 24 facets in the WHOQOL-100, with a question from each facet to remain as the complete construct of the holistic concept of quality of life.

The 26 questions were in a five-point Likert scale for assessing the following facets/aspects in the four domains of quality of life defined by the WHOQOL group (Skevington, Lotfy, Connell, & the WHOQOL Group, 2004): (1) physical health domain: pain and discomfort, energy and fatigue, sleep and rest, dependence on medication, mobility, activities of daily living, and working capacity; (2) psychology: positive feelings, negative feelings, self-esteem, thinking, learning, memory and concentration, and body image; (3) social relationships: personal relations, sex, practical social support; (4) environment: financial resources, information and skills, recreation and leisure, home environment, access to health and social care, physical safety and security, physical environment, and transport.

Analyzing the data of 11,053 respondents from 20 field centers in 18 counties, the WHOQOL Group reported the following statistics regarding the reliability and validity of the WHOQOL-BREF questionnaire: (1) concurrent validity with the WHOQOL-100: the correlations in the four domains ranged from 0.89 (for social domain) to 0.95 (for physical domain); (2) internal consistency: Cronbach alpha values in the four domains ranged from 0.66 (for social domain) to 0.84 (for physical domain); (3) discriminant validity: t-test analyses showed statistically significant differences between ill and well people; (4) test-retest reliability: correlations ranged from 0.66 (for physical domain) to 0.87 (for environment domain); (5) confirmatory factor analysis: the Comparative Fit Index reached 0.900; (6) multiple regression analysis showed that all four domains made a significant contribution to explaining variance observed in the general facet relating to overall quality of life and general health (WHOQOL Group, 1998).

Research on quality of life using QHOQOL-BREF was mostly focused on health-related studies, such as development of revised quality of life questionnaires for specific disease groups or survey of quality of life on different population groups to inquire factors pertinent to health or health care improvement (Chung & Chung, 2009; Davis, Waters, Shelly, and Gold, 2008; Jaracz, Falfoss, Górna, & Baczyk, 2006; Leung, Wong, Tay, Chu, & Ng, 2005; Liang, et al., 2005; Lin, et al., 2002; Nedjat, Naieni, Mohammad, Majdzadeh, & Montazeri, 2011; Schmidt, et al., 2006; Wahl, et al., 2009; Wang, & Liu, 2006; Yao, Wang & Chung, 2007). Therefore, it was believed that besides health promotion, a study on “learning and quality of life” would also generate useful information for this specific population group—students, since this type of study is still scarce in the research field on quality of life.

2.2. Research on EFL/ESL

Abundant research was done to explore second language acquisition and had produced invaluable information for both learners and educators. Dixon et al. (2012) synthesized around 100 reports from a pool of 1,541 studies during 1977-2011 on learners aged between 4-18 with respect to second language learning and summarized research findings pertaining to L2 learning in child development, psychological, social-cultural, and educational fields. These findings stated the following: (1) learners with strong learning attitudes, motivation, and L1 proficiency were more successful; (2) the amount of input and interaction with native speakers had a positive effect on L2 learning; (3) appropriate L2 programs, sufficient literature learning time, and clear grammar instruction tended to result in higher learning outcomes; (4) characteristics of more successful L2 teachers included excellent teaching skills, good commands in both students’ L1 and L2, and a strong desire to teach effectively; (5) parents’ social economic status, sufficient home literature reading, and opportunities to use L2 outside of the classroom affected L2 learning achievements; (6) to start learning L2 at an earlier age takes a longer learning time but was more likely to attain native-like proficiency, while older learners studied L2 more efficiently but were less likely to achieve actual native-like proficiency on all measures of pronunciation and speech perceptions.

Other factors pertaining to second language learning include learning strategy, parents’ support, campus English environment, native-speaking L2 teachers, students’ home areas, ability grouping, socioeconomic status, gender, curriculum and instruction, etc. (Chang, 2005; Chang & Chang 1998; Chen, 2007; Chiang, 2003; Ding, 2005; He, 2004; Huang, 2002; Karthigeyan & Nirmala, 2012; Lee, 2008; Ma, 2012; Shi, 2005; Ting, 1998; Yan & Horwitz, 2008; Yu, 2000). However, one facet that was rarely investigated directly was the learners’ quality of life. Therefore, it was believed that a study on this issue could produce invaluable

information in the field of learning English as a second language.

In summary, the literature reviewed in this section demonstrated that a link between the research in the fields of second language learning and quality of life was a valuable interdisciplinary inquiry for improving English teaching effectiveness or learning achievement. The information generated in this study could be very beneficial for schools, administrators, teachers, learners, parents, and even government officials who make educational policies.

3. Method

3.1. Subjects

The subjects of the study were the freshmen of the 2012 school year in the Applied English Department at National Quemoy University. The freshmen included 51 students in Class A who graduated from senior high schools and 41 students in Class B who graduated from vocational high schools. Excluded three students from Mainland China in Class A, the total number of participants in this study was 89 Taiwanese students who graduated from the two tracks of high school in Taiwan.

3.2. Instruments

3.2.1 WHOQOL-BREF Assessment

The measurement for evaluating the participants' quality of life was the WHOQOL-BREF questionnaire developed by the Quality of Life Group in World Health Organization. The WHOQOL-BREF was a cross-cultural assessment with good reliabilities and validities supported by profound research in the process of development and has been widely adopted in studies on quality of life after its development (Hannestad, Rustøen, Knudsen, Lerdal, & Wahl, 2004; Hwang & Tang, 2012; Skevington, et al., 2004). The instrument was found to be highly reliable with an alpha coefficient of 0.85 in this study.

3.2.2. English Achievement Tests

The other assessments employed in the study were four tests for measuring students' English achievement in the grammar course taught by the researcher of this study. These were content based criterion tests for measuring students' learning outcomes during the course in the four English skills - listening, speaking, reading, and writing respectively (Appendix).

Because the grammar course was a yearly curriculum and 20 chapters were included from the chosen textbook, *English Grammar* (4 ed.) by Azar and Hagen (2009), the tests for this study were designed to assess the first 10 chapters covered in the first semester.

Following the sequence of the chapters in the book, the tests measured the 12 verb tenses (chapters 1-5), nouns (chapter 7), pronouns (chapter 8), and modals (chapters 9-10).

For assessing their writing skills, students were asked to write 12 sentences on a topic using all the 12 verb tenses learned. For reading skills, students were tested on correcting errors of nouns in a text. Although this test was not exactly a representative reading test, it was chosen for the study because of two reasons. Firstly, the text in the test required a high degree of student reading comprehension ability to provide the correct answers. Secondly, in order to encourage the students to finish the exercises in the textbook, the quizzes in the course were taken from these exercises and the textbook did not have typical reading exercises in these chapters. As for assessing listening skills, students were tested on pronouns related to listening comprehension items. Regarding the speaking skills, each subject was asked to articulate sentences using modals within a time limit of one minute.

The schedule for administering the above measurements during the first semester of the 2012 school year was listed below (Table 1).

Table 1

Schedule for Administering Measurements to the Participants

Beginning Level test	Writing test	Reading test	Listening test	Speaking test	WHOQOL-BREF
4 th week	9 th week	15 th week	17 th week	17 th week	18 th week

3.3. Procedure

For collecting the data of the study, the following procedure was taken in the first semester of the 2012 school year, starting September 16, 2012 to January 25, 2013.

Firstly, permission to employ the WHOQOL-BREF questionnaire in the study was applied for and granted from the WHOQOL development division.

Secondly, the student's learning outcomes in the course were measured after the related contents were taught. The writing test was given twice to examine their early differences and learning progress. The first test was given after the 12 verb tenses were previewed using instructor-made lesson handouts before the textbooks were ordered and shipped to the school. This test was given without notifying the students beforehand to evaluate their differences at the beginning of the course. During the test, the students were also required to give related information on their scores from the English subject in the Taiwan Joint College Entrance Examination and their scores in other nationally recognized standardized English tests such

as the TOEIC, TOEFL, and Taiwan's GEPT (General English Proficiency Test). The same writing test was given again during the mid-term examination for extra bonus points. This practice was used to make certain that the students took both tests seriously and their progress in learning the course contents could be measured in the tests. Because this test was a free writing test and the first test paper was not returned or discussed after administration, the threat of test validity due to memory learning or preparation for the second test was reduced to a minimum degree. Then reading, listening, and speaking tests were given, normally two weeks after the related contents were taught.

The WHOQOL-BREF was administered at the end of the semester to all the participants. Following the instructions in the user manual for administering the assessment, the researcher explained the purpose of the survey and the rules for giving answers, and ensured them of the confidentiality of their personal information. Each question was read aloud to the students, with the exception of item 21 for the sex facet, because all the participants were not married. In addition, because the assumption for obtaining valid data from questionnaires was that the participants gave honest answers, the researcher especially emphasized the importance of this aspect to the participants.

3.4. Data Analysis

The collected data from the tests for the study were graded, and the information collected from the WHOQOL-BREF questionnaire were checked, recorded and transformed to a 0-100 scale, using 50.0 as the scalar midpoint. Then T-test and Pearson's product moment correlation were employed for statistical analysis in the SPSS program.

4. Results and Discussion

In this section, the results of the study were presented in the sequence of the research questions of the study for the comparison of the English majors who graduated from senior high school and vocational high school in their English learning achievements and quality of life in the first semester of their freshman year at NQU.

4.1. Question One: Are there differences in the beginning English level between the two groups?

To answer this research question, a course content-based writing test was given to the participants without notification beforehand at the end of the semester's first month while most of them were still overwhelmed by the numerous activities for welcoming freshmen and exploring their new environment in the college, which was located on a small island far away

from mainland Taiwan. In this writing test, the participants were also asked to give the information on their English abilities such as their scores in their national college entrance examination and standardized English proficiency tests-- TOEFL, TOEIC, or GEPT.

Unfortunately, the scores which the students could provide were not as comparable between the two groups as the researcher desired. For Class A, almost all students (92%) gave their scores in their college entrance examination (Essential Academic Ability Test), but only about half of them (52%) took the GEPT, whilst six of them took TOEIC. On the other hand, only six students (15%) in Class B gave scores in the national college entrance examination, but most of them took the GEPT (76%) and/or TOEIC (63%).

With the information obtained from the participants about their beginning English level in the standardized tests, however, a T-test was still applied to compare the major common scores, GEPT results, in the two classes. The statistics did not show significant differences between the two groups ($n = 25$ & 31) who took the GEPT test ($t(54) = .173$, $p = .864$).

With the first writing test on 12 verb tenses, the students' performances did not differ significantly in the T-test analysis, either ($t(87) = -.599$, $p = .551$). The average scores in the two classes were quite close with 70 in Class A and 72 in Class B.

4.2. Question Two: Are there differences in students' learning achievements between the two groups?

To compare the two groups in their learning achievement, the four English skills were measured in the context of learning the course contents. The results for this comparison presented in Table 2 showed that only in the speaking skill did the two groups perform differently at a statistically significant level ($t(87) = -2.035$, $p < .05$). Group B obtained higher scores than Group A in the speaking test. In other words, students of the Applied English Department at NQU who graduated from vocational high school exceeded students who graduated from senior high school in their speaking test. In all the other three skills, the scores obtained by the two groups did not reach statistically significant differences. When the progress made by the two groups between the two writing tests was compared, no statistically significant difference was revealed between the two groups, either ($t(87) = .157$, $p = .876$).

The above results of the analysis seemed to match the different English training which the students received in the two tracks in high school. Since Group A graduated from senior high school with fewer opportunities to receive speaking training, their speaking performance was not as fluent as that of Group B, whose major in vocational high school was English as a second language.

From the above results of the analysis, it seemed appropriate to conclude that the two

tracks of students in the Department of Applied English at NQU did not differ significantly in their English learning achievement, even though slight differences in mean scores were shown in the four English skills between the two groups of students with the exception of their speaking skills. English majors who graduated from vocational high school exhibited a better performance in speaking fluency than graduates from senior high school and this result agreed with the differences in oral communication training they received during their high school period.

Table 2

T-test Results for Comparison of Group A & B in Four English Skills

Skill	Group	Mean	SD	t	df	p
Listening	A (n = 48)	64.85	20.384	1.958	87	.053
	B (n = 41)	57.07	16.469			
Speaking	A	69.79	22.924	-2.035	87	.045*
	B	78.78	17.916			
Reading	A	69.75	20.227	-.067	87	.946
	B	70.05	21.561			
Writing	A	83.69	14.243	-.873	87	.385
	B	85.54	14.155			
Progress	A	13.73	14.51	.157	87	.876
	B	13.24	14.57			

Note. * $p < .05$

4.3. Question Three: Are there differences in quality of life between the two groups?

The results in Table 3 indicated that the two groups of students in this study did not show statistically significant differences in three domains of their quality of life - physical health, social relationships and environment. These results made sense in that generally speaking they were all healthy young men and that they had just arrived at the same university department and had made new friends in a very similar environment.

However, the two groups did show statistical differences in their psychological traits in the second domain ($t(87) = -2.273, p < .05$). When further analyzing their differences in this domain, it was found that the two groups expressed significant statistical differences in the facet of self-esteem ($t(87) = -3.065, p < .05$), with students from senior high school possessing lower self-esteem. One possible explanation of this phenomenon could very well

be that the students from senior high school expected to be more successful and outstanding in many more ways, but the students from vocational high school had already accepted their decision and achievement in their study and career direction. Another explanation of this result might possibly be that NQU was not a top university in the track of universities that mainly admitted high school graduates, but NQU was a good choice for graduates of vocational high schools in Taiwan.

Table 3

T-test Results for Comparison of Group A & B in Quality of Life

Domain	Group	Mean	SD	t	df	p
Overall	A (n = 48)	56.52	16.49	-.463	87	.645
	B (n = 41)	58.27	17.65			
Domain 1	A	64.27	10.03	-1.008	87	.316
	B	66.19	13.00			
Domain 2	A	58.98	11.46	-2.273	87	.026*
	B	64.10	11.06			
Domain 3	A	63.60	15.09	.359	87	.721
	B	68.56	19.95			
Domain 4	A	58.42	10.37	.307	87	.759
	B	57.27	14.16			

Note. * $p < .05$

4.4. Question Four: Are there relationships between the student's quality of life and English learning achievements in the two groups?

The results of the statistical analysis in the relationships between student's quality of life and learning achievements showed that no statistically significant correlations were found in the four domains of the students' quality of life and the four English skills in the two groups of the study (Table 4). One reason for this result might be that the two groups basically had a similar quality of life in a similar kind of freshman life and living environment as the data revealed in research question three of the study. Therefore, it did not show a clear relationship between the two factors - quality of life and learning achievements in this study. If the participants of the study had differed a great deal in their quality of life and the number of subjects had been large enough, maybe a correlation could have been found between the quality of life and learning achievements.

When further correlating the individual items of the questionnaire with the four English skills, it was found that questions 9, 10, and 16 exhibited a statistically significant relationship with listening skill. This result showed that the students' scores in the listening test correlated with their physical environment ($r = .260$, $p = .014$), energy ($r = .216$, $p = .042$), and sleep ($r = .236$, $p = .026$). In other words, students' sleep, energy, and physical environment might have influenced their performance in their listening test. This finding confirmed the researcher's experience of instructing freshmen at NQU. When students could not sleep well in the dormitory because of the different schedules of their roommates, it was usually difficult for these students to perform well during their learning process. Therefore, maintaining a well-managed physical environment for students to acquire sufficient rest, renew their energy and have suitable places to study was very important for their learning development.

Table 4

Correlation Coefficients between Students' Quality of Life and Learning Achievement

Domain	Listening	Speaking	Reading	Writing
Overall QoL	$r=-.061$ $p=.572$	$r=-.062$ $p=.563$	$r=-.054$ $p=.613$	$r=-.038$ $p=.726$
Physical	$r=-.002$ $p=.988$	$r=.080$ $p=.454$	$r=.105$ $p=.325$	$r=-.088$ $p=.410$
Psychological	$r=-.181$ $p=.090$	$r=.058$ $p=.592$	$r=.020$ $p=.854$	$r=-.017$ $p=.872$
Social	$r=-.049$ $p=.650$	$r=.028$ $p=.796$	$r=-.144$ $p=.180$	$r=-.181$ $p=.090$
Environmental	$r=.166$ $p=.120$	$r=-.037$ $p=.727$	$r=.078$ $p=.467$	$r=-.071$ $p=.509$

Note. $*p < .05$, $n = 89$.

5. Conclusion

This study sought to compare the English majors' learning in a course between students' who graduated from senior high school and students who graduated from vocational high school as well as to investigate the English majors' quality of life and the relationship between their quality of life and their English learning achievement in the course. Applying criterion tests for measuring students' course content learning achievement in listening,

speaking, reading, and writing skills, and administering a cross-cultural assessment developed by the WHOQOL Group for measuring quality of life, the statistical analyses of the data revealed that the two groups of English major freshmen at NQU graduated from senior high school and vocational high school did not differ significantly in their beginning English level, learning progress, or listening, reading, and writing skills. However, they exhibited differences in their speaking skill at a statistically significant level. Students who graduated from vocational high school exceeded those who graduated from senior high school in their fluency of speaking. This result concurred with the language training the two groups of students received in high school. The English majors who graduated from vocational high school majored in English as a second language in high school while students who graduated from senior high school did not have many opportunities to speak English in their life environment where English is considered a foreign language.

Another comparison that was made between the students who graduated from senior high school and the students who graduated from vocational high school was in the four domains of students' quality of life. The results of the analysis showed that the two groups of participants did not differ in their quality of life at a statistically significant level in the physical health, social relationships, and environment domains. However, the two groups exhibited differences in the psychological domain, especially in the facet of self-esteem. Students who graduated from vocational high school expressed higher self-esteem than students who graduated from senior high school in the Department of Applied English at NQU. One possible reason for this trait might be that NQU was a better choice in the ranks of the colleges which mainly admitted vocational high school graduates than the colleges which mainly admitted senior high school graduates. Another possible explanation of this result could be that students who graduated from vocational high school were already resigned to accept their lower competency level in English but the students who graduated from senior high school possibly aspired to achieve more in their academic study and other aspects of life and probably had hoped for a better choice of university.

As for the relationship between the students' quality of life and English learning achievements, no statistically significant correlation was found between the four domains of their quality of life and their course achievements in listening, speaking, reading or writing. When correlating the students' learning performance with the individual facets of their quality of life, three facets - sleep, energy, and physical environment, showed significant relationships with the students' listening performance. This finding indicated an important factor of the students' lives that might influence their learning performance. Since the

majority of freshmen at NQU lived in college dormitories, this finding could serve as strong supportive argument for maintaining well managed students' dormitories at college for the purpose of providing students with a healthy learning environment. When students could rest and sleep well in their rooms, their energy for daily activities was more likely to be renewed and their performance in the course could attain a more ideal level.

In conclusion, the NQU English major freshmen who graduated from senior high school and vocational high school did not exhibit significant differences in their beginning English level, progress, or course achievements in listening, reading, and writing skill. Nor did they differ significantly in their quality of life. However, the two groups performed differently in speaking fluency. Students who graduated from vocational high school majoring in English exceeded students who graduated from common senior high school in the speaking test. And NQU English major students who graduated from vocational high schools expressed higher self-esteem than students who graduated from senior high schools. Another result of this study revealed that the three facets of student life in the WHOQOL measurement- sleep, energy, and physical environment- correlated with their performance in the listening skill. The above findings could serve as important references for instructors and administrators to become much more involved in their course instruction, student counselling and the improvement of life environment for English majors who graduated from vocational high schools or senior high schools.

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Appendix

Writing Test

Directions: Make sentences using each of the following verb tenses indicated on the topic of self-introduction.

1. The simple present tense
2. The simple past tense

3. The simple future tense
4. The present progressive tense
5. The past progressive tense
6. The future progressive tense
7. The present perfect tense
8. The the past perfect tense
9. The future perfect tense
10. The present perfect progressive tense
11. The past perfect progressive tense
12. The future perfect progressive tense

Reading Test

Exercise 6 in Chapter 7 (page 104)

Listening Test

Exercise 9-17 (page 166), all questions

Exercise 9-26 (page 170), question 1 & 2

Exercise 10-33 (page 200), question 1 & 4

Speaking Test

Exercise 9-33 (page 174)

Note: The grammar book adopted for instruction and assessment in the study was:

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