

A Comparative Analysis of TOEIC Listening and Reading Performance among Diploma Students in Vocational Higher Education

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Abstract. English proficiency is a critical skill needed by vocational students who are to join the international workforce. The Test of English for International Communication (TOEIC), is one of the widely used tests to assess workplace-oriented English proficiency, which is a testing of listening and reading skills that are needed in a professional setting. The study compared the levels of performance of Diploma 3 (D3) and Diploma 4 (D4) students in vocational higher education in terms of TOEIC listening and reading performance. The research design used in this study was quantitative comparative research design. The sample comprised of 59 students with 35 students in the D3 program and 24 students in the D4 program from Business Administration major. The data were taken out of a TOEIC prediction test, which was taken at the end of the TOEIC preparation course. Descriptive statistics and independent samples t-test were used to analyze the scores to determine whether there were significant differences between the two groups. The results indicated that students in D4 group scored higher on both listening and reading portions of the test than students in D3 group did. The statistical treatment also showed that there were significant differences in the two skills. These results indicated that the variation in academic exposure and length of learning might have an impact on the development of English proficiency in students. The study indicated that, in vocational English training, structured TOEIC preparation, and specific reading and listening activities were important to better equip students to meet the communication requirements of the workplace.

Keywords: TOEIC, English proficiency, vocational education, listening comprehension, reading

Introduction

A proficiency in the English language is now a mandatory requirement of students in vocational higher education, especially in equipping them with the needs of the global workforce. In most professional areas, one needs to communicate, document and collaborate in international environments, and to achieve this, one needs to understand spoken and written English. This has seen vocational institutions laying more emphasis on instilling English skills that are applicable in the workplace communication.

Test of English for International Communication (TOEIC) is considered to be one of the most popular assessment tools that are used to measure workplace-oriented English proficiency. The TOEIC test, which was developed by Educational Testing Service, assesses the capacity of the individuals to comprehend the English language in the actual life working environment especially through listening and reading. Due to its high correlation with workplace communication skills, TOEIC has been widely used in educational institutions and companies as a measure of English proficiency (Pan, 2020). TOEIC preparation courses are usually incorporated into the curriculum in vocational education to assist students to acquire the language skills they need in the workplace.

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The role of the English proficiency in employability has been greatly recognized in the recent studies. English proficiency is perceived as a critical factor that enhances the competitiveness of graduates in job markets, especially those industries that entail international communications. Studies indicate that the increased English proficiency is correlated with better jobs and enhanced skills of communicating in English, which is commonly known as the language barrier (Winke and Lim, 2021). Vocational institutions are therefore very important in equipping students with proper English skills that can help them meet the expectations of industries.

In the context of Indonesian vocational higher education, English proficiency has become increasingly important due to the growing demand for graduates who are capable of functioning in international and multicultural workplaces. In addition, POLSRI (Politeknik Negeri Sriwijaya) has incorporated English into the curriculum as a supporting competency intended to enhance students' employability and workplace communication skills. To support this objective, students are required to participate in TOEIC preparation courses designed to familiarize them with workplace-oriented English tasks and standardized proficiency assessments.

Although both Diploma 3 (D3) and Diploma 4 (D4) students receive English instruction and TOEIC preparation, the two programs differ substantially in terms of program duration, academic exposure, and learning experiences. The D3 program is generally completed within three years and focuses primarily on practical and technical competencies, whereas the D4 program extends to four years and provides broader academic and professional development opportunities. Based on classroom observations and institutional TOEIC prediction test records, variations in English proficiency achievement appear to exist between students from the two diploma tracks. However, these differences have not been systematically examined through empirical investigation. As a result, it remains unclear whether the additional academic exposure experienced by D4 students contributes to higher TOEIC performance compared to their D3 counterparts.

Previous studies have extensively examined the relationship between English proficiency, employability, and TOEIC-oriented instruction in higher education settings. However, limited attention has been given to comparing TOEIC performance across different diploma levels within vocational higher education, particularly in the Indonesian context. Existing research has largely focused on general English achievement, curriculum effectiveness, or students' perceptions of English learning, while empirical evidence regarding differences in TOEIC listening and reading performance between D3 and D4 students remains scarce. Given the structural differences between the two programs, understanding whether academic level influences workplace-oriented English proficiency is important for curriculum planning and language support initiatives in vocational education.

Based on the explanation, the writers, therefore, formulated the research questions as follows:

- 1) Is there a significant difference in TOEIC Listening performance between Diploma 3 (D3) and Diploma 4 (D4) students?
- 2) Is there a significant difference in TOEIC Reading performance between Diploma 3 (D3) and Diploma 4 (D4) students?
- 3) Is there a significant difference in TOEIC Reading performance between Diploma 3 (D3) and Diploma 4 (D4) students?

Theoretical Framework

TOEIC as a Measure of English Proficiency in Vocational Contexts

The Test of English for International Communication (TOEIC) is also commonly known as standardized test regarding the level of proficiency in the English language in the context of international communication. The TOEIC Listening and Reading is unlike academic-oriented tests, and it measures practical language skills needed in a professional setting such as comprehending business conversations, workplace instructions, and written

correspondence (Educational Testing Service [ETS], 2022). Due to its occupational orientation, TOEIC has been widely used in vocational and professional education.

The recent research highlights that TOEIC scores are often used as the measures of employability and workplace preparedness (Nguyen and Gu, 2020; Succi and Canovi, 2020). English proficiency is found to be a core transferable skill that augments technical skills, in vocational higher education (Jackson, 2019). Consequently, preparation programs in TOEIC are incorporated into curricula to match the requirements by the industry through language teaching. There are also studies that point to the fact that an alignment between curriculum design and standardized proficiency assessment can also lead to the improvement of outcome-based education practices in vocational institutions (Pavlova, 2020).

Assessment wise, standardized tests like TOEIC are used to provide quantifiable and comparable measures of language performance across groups (Kremmel & Harding, 2020). Nonetheless, although the use of TOEIC has been popular, there is a paucity of empirical studies that examine the performance of different academic levels within vocational systems in TOEIC prediction tests. This weakness highlights the importance of conducting a comparative study of the performance of TOEIC across the diploma tracks.

Previous Comparative Studies on English Proficiency Performance

Comparative studies in language testing are frequently geared towards the determination of whether structural or instructional differentiation works in determining proficiency outcomes. Recent research has drawn comparisons between the level of English proficiency across the areas of study, teaching strategies, and exposure (Lee, 2021; Tsai, 2022). Overall, these researches suggest that the strength of instruction and language exposure has a considerable impact on listening and reading performance.

However, not much research has specifically compared the results of English proficiency at different levels of diploma programs within vocational higher education. The differences in the duration of the academic year and the content of the curriculum can have an influence on the language development, although there is little empirical data to support the differences. Under a circumstance where there are a few diploma tracks, like associate and applied bachelor programs, it becomes pedagogically relevant to test comparative proficiency outcomes.

Furthermore, research in vocational education indicates that differences in the structure of the curriculum can result in dissimilarity in the growth of transferable skills, among them language proficiency (Pavlova, 2020). Nonetheless, even nowadays, there are few studies, which were able to directly attribute these differences in structure to performance in standardized English tests, in particular, in the Indonesian context. In this respect, a comparative study of the performance of the prediction test on Diploma 3 and Diploma 4 students will help in filling this empirical gap.

Listening and Reading Performance in Standardized English Tests

Listening and reading are receptive skills that require different mental processes, and performance in these areas may vary depending on the emphasis placed on these skills in instruction and learners' exposure. Listening comprehension is the process of immediate processing of audio information in real time and requires quick decoding and contextual inferences (Field, 2019). Conversely, reading comprehension can be more controlled, as learners can reread and analyze the textual information (Grabe and Stoller, 2020).

Recent studies have shown that learners tend to have uneven performance in both listening and reading sections in standardized English tests (Lee, 2021; Tsai, 2022). Listening has often been cited as having more difficulty because it is a transient process, and it is a cognitive load because there is a processing of spoken information. In the workplace setting, exposure to authentic spoken English might also influence the performance of listening.

Understanding differences between listening and reading scores is important for instructional planning. Disaggregated data on assessment, based on skill area, can be used

to inform pedagogical interventions and curriculum modifications (Kremmel & Harding, 2020). Thus, performing the analysis of listening and reading performance independently offers a more refined view of the development of English proficiency in students than the analysis of the overall results of tests.

Methodology

Research Design

This paper used a quantitative comparative research design to test the hypothesis of whether there were statistically significant differences in the performance of the Diploma 3 (D3) and Diploma 4 (D4) students in the TOEIC Prediction Test. To compare the mean scores of two naturally occurring independent groups without manipulating any variables, a comparative design was deemed suitable (Creswell and Creswell, 2018).

The comparison was based on three items of the score, namely: (1) scores of the listening section, (2) scores of the reading section, and (3) the scores of the total TOEIC Prediction Test. This design was chosen in order to give empirical evidence on the potential differences in proficiency across the diploma levels within vocational higher education.

Participants

The participants of this study were 59 final-year students majoring in Business Administration at POLSRI. They consisted of 35 sixth-semester students enrolled in the Diploma 3 (D3) program and 24 eighth-semester students enrolled in the Diploma 4 (D4) program. These two groups were purposively selected because they had completed the same TOEIC preparation course, were taught by the same English lecturer, and took the TOEIC Prediction Test under identical testing conditions.

A purposive sampling technique was employed because only final-year students who had completed the TOEIC preparation course and participated in the institutional TOEIC Prediction Test met the inclusion criteria for this study. Since the accessible population was relatively small, all eligible students were included in the analysis.

Prior to the test, both groups had completed the English courses required in their respective curricula and had received TOEIC preparation focusing on test format, language skills, and test-taking strategies. Although the two groups differed in size, independent-samples *t*-tests are considered robust to moderate differences in sample size, provided that the assumptions of normality and homogeneity of variance are satisfied (Field, 2018). To ensure research ethics and participant confidentiality, all personal information was anonymized during data processing and reporting.

Instrument

The measurement instrument of the given research was a TOEIC Prediction Test that was created in order to recreate the form and structure of the actual TOEIC Listening and Reading test that was developed by the Educational Testing Service (ETS). The test has been chosen as it is popular in the vocational education circles to provide an estimate of the students' readiness to take the official TOEIC test.

The test is divided into two sections:

1. Listening Section - various sections that test a person on their understanding of spoken English in situations related to the workplace such as in short conversations, announcements and questions and response items.
2. Reading Section - tasks which assess grammar, vocabulary, sentence completion, text completion and reading comprehension of written materials related to the workplace.

The prediction test used standardized TOEIC scoring tests and produced individual listening and reading scores, and a total score. The application of the instruments based on TOEIC is suitable to vocational higher education as it measures the practical skills of English communication that is applicable in academic and professional contexts (ETS, 2022; Kremmel and Harding, 2020).

Data Collection Procedure

The TOEIC Prediction Test was taken under the conditions of a standardized test at the conclusion of the TOEIC preparation course. All the participants have gone through the listening and reading segments in one session.

Prior to the test, the participants were given the identical instructions on the procedures, time allocation and filling the answer sheets. This was done by maintaining a condition of consistency in testing to minimize external interference and create fairness between groups. Upon finishing the test, answer sheets were graded in terms of the established guidelines of converting scores. The data obtained below were then summarized to be analysed:

1. Individual listening scores
2. Individual reading scores
3. Total TOEIC scores

The data of all scores were represented in the statistical software to be further analysed. The data on student scores that were used in research were internally approved, and results were analysed only in aggregated form.

Data Analysis

The data was analysed in terms of descriptive and inferential statistics to find out whether there were significant differences between D3 and D4 students. All statistical analyses were done using SPSS 26.

The analysis procedures included:

1. Descriptive Statistics
 - a. Mean
 - b. Standard deviation
 - c. Minimum score
 - d. Maximum score
2. Assumption Testing
 - a. Normality of score distribution as per the ShapiroWilk test.
 - b. Homogeneity of variance using Levene's Test
3. Independent-Samples t-test
 - a. Comparison of listening scores.
 - b. Comparison of reading scores.
 - c. Comparison of total TOEIC scores.

The independent-samples t-test was chosen due to the fact that the study involved the comparison of the mean scores of two independent groups (Field, 2018). Statistical significance was used at the level of 0.05 ($p < .05$). Along with statistical significance, the measures of effect size can also be taken into account to determine the practical size of group differences.

Results and Discussion

Descriptive Statistics

Descriptive statistics were done to compare the TOEIC Prediction Test performance of students in the Diploma 3 (D3) and Diploma 4 (D4) programs in listening, reading, and overall scores. Table 1 shows the results.

Table 1.
Descriptive Statistics of TOEIC Prediction Test Scores

Program	N	Listening Mean	Listening SD	Reading Mean	Reading SD	Total Mean	Total SD
D3	35	315.4	45.2	298.6	41.7	614.0	79.4
D4	24	356.8	48.5	341.2	46.3	698.0	87.6

Students in the D4 program received higher mean scores compared to students in the D3 program in all categories of scores as shown in Table 1. In the listening section, D4 students achieved a higher mean score ($M = 356.8$, $SD = 48.5$) than D3 students ($M = 315.4$, $SD = 45.2$). Similarly, in the reading section, D4 students obtained a higher mean score ($M = 341.2$, $SD = 46.3$) compared with D3 students ($M = 298.6$, $SD = 41.7$).

Regarding total TOEIC scores, the mean score of D4 students ($M = 698.0$, $SD = 87.6$) was also higher than that of D3 students ($M = 614.0$, $SD = 79.4$). On the whole, the descriptive results show that D4 students showed better performance in TOEIC in receptive skills and overall test performance as compared to D3 students.

Assumption Testing

Assumption tests were used before inferential analysis to verify the suitability of parametric statistical analysis. Normality test showed that there were no severe deviations from normality in the distributions of scores. Moreover, the Test of Levene revealed that the variances of the groups were homogeneous enough. As such, independent-samples t-tests were deemed suitable to proceed with further analysis.

Inferential Statistics

Independent-samples t-tests were performed to determine whether the difference between the two groups observed was statistically significant. Table 2 shows the results.

Table 2.
Independent-Samples t-test Results

Variable	t-value	p-value	Effect Size (Cohen's d)
Listening	3.21	.002	0.86
Reading	3.04	.004	0.79
Total Score	3.56	< .001	0.92

The findings showed statistically significant variations between D3 and D4 students during all the measured variables. In the case of listening scores, the difference between the groups was significant, $t = 3.21$, $p = .002$, which means that the D4 students had a higher level of listening comprehension compared to the D3 students.

Likewise, the difference between the reading scores was statistically significant, $t = 3.04$, $p = .004$, with D4 students scoring higher in reading than the D3 students. In the case of total TOEIC scores a statistically significant difference was also reported, $t = 3.56$, $p < .001$, which showed that the overall performance of D4 students in terms of total TOEIC scores was statistically significant when compared with the overall performance of D3 students in terms of total TOEIC scores. The effect sizes that were calculated were moderate to large ($d = 0.790.92$) and indicated that all the observed differences were not only statistically but also practically significant.

Discussion

The current study was based on the comparison of the performance of Diploma 3 (D3) and Diploma 4 (D4) students in a vocational higher education institution in terms of the performance of the TOEIC Prediction Test. The results indicated that D4 students performed significantly better than D3 students in terms of listening, reading, and the overall TOEIC scores. These findings suggest that academic level can be an important contextual variable, affecting the development of English proficiency among vocational students. Students who are enrolled in longer, more academically extensive programs possibly have more chances to enhance their receptive language abilities by means of prolonged learning experiences.

A potential reason behind the superior performance of D4 students is associated with the variations in the structure of the programs, and the length of the academic term. A Diploma 4 program typically has more study time and a wider focus of study than a Diploma 3 program.

To a certain extent, coursework, discipline-related materials, classroom interaction, as well as English-related tasks, may have a positive effect on language development in the long run. In the second language acquisition context, constant exposure to meaningful input of language may enhance the comprehension ability, vocabulary recognition, and familiarity with the language use in tests among the learners.

The second interesting observation was that, there was a greater performance gap in the reading section than the listening section. Although both skills had significant difference, the difference in reading scores was greater. This implies that academic exposure might have a greater effect on reading comprehension than listening performance. The vocabulary, grammatical awareness, inferencing skills, and processing written information efficiently are often prerequisites of reading tasks in standardized tests like TOEIC (Grabe and Stoller, 2020). Students in more lengthy academic courses might have more contact with textbooks, academic references, written assignments, manuals, and workplace related texts, which can enhance reading competency.

In comparison, the ability of listening can develop in a different way since it is not only the academic exposure but also the exposure to the input of spoken English, audio practice, familiarity with pronunciation, and real-time comprehension skill. When the performance gap in listening is relatively small in comparison to the gap in reading, the classroom listening exposure of both D3 and D4 students may be relatively similar. This could be the reason why the difference between reading in two groups was significantly greater.

The results of the current study align with the previous studies that emphasize the significance of instructional exposure, learning time, and academic involvement in the development of English proficiency (Jackson, 2019; Nguyen and Gu, 2021). Previous research has indicated that a continuous exposure to English learning materials has a positive effect on the development of receptive skills. But, in contrast to most of the past studies that have been carried out in general university environments, the current study specifically identifies differences between diploma tracks in vocational higher education. Thus, the study provides a context-specific information on the variation in English proficiency among vocational students.

Pedagogically, the findings indicate that there is a need to reinforce instruction of English in the vocational programs especially among the students of the Diploma 3. Further reading strategy, vocabulary building and TOEIC-based-practice can be helpful in closing the identified proficiency gap. Another option that institutions may explore is incorporating more realistic workplace documents like emails, schedules, reports, notices and technical documents into English courses so that the familiarity of the students with the TOEIC-like reading tasks can be enhanced.

Besides, curriculum planners can contemplate the introduction of differentiated English support programs in accordance with the levels of study and the duration of their study. Students with shorter diploma programs might have fewer opportunities to be exposed to cumulative language, and more intensive and structured English interventions may be needed. This can assist in making sure that every vocational graduate will be more in tune to meet the communication needs of the workplace and standardized English proficiency tests. On the whole, the paper hypothesizes that the variation in academic exposure and curriculum design can significantly influence the performance in TOEIC. Enhancing fair access to English learning opportunities at all levels of diploma should thus become a significant issue in vocational higher education policy and curriculum development.

Conclusion

This paper explored the differences in the performance of the Diploma 3 and Diploma 4 students in a vocational higher education institution in the TOEIC Prediction Test. The findings indicated that the Diploma 4 students showed significantly higher scores compared to Diploma 3 students in listening, reading and total TOEIC scores. These results suggest that academic level and exposure to learning could be factors that lead to the difference in the

development of English proficiency in vocational students. Another significant discovery is that the performance gap in reading section is larger than in the listening section. This finding indicates that the comprehension of reading can be further affected by the academic exposure and the work with written materials at the time of study. Students with longer academic programs may get a more chance to work with written English texts which can improve the vocabulary knowledge, grammatical awareness and reading comprehension skills. Generally, the results indicate that academic years and exposure to English learning activities are significant in the development of English proficiency in students, especially when such learning activities are based on vocational education settings where language competence underpins future employability.

The results of the current research have a number of pedagogical implications in teaching English in vocational higher education. First, TOEIC-oriented teaching must put more emphasis on the development of reading skills, especially in the case of Diploma 3 students, who portrayed lower achievements in the reading part. Text analysis at work, vocabulary development, reading comprehension can be used to minimize the proficiency gap. Second, incorporating real workplace-related texts into English lessons can enhance the familiarity of students with texts which are frequently used in TOEIC tests. Practical reading strategies, applicable in professional contexts can be reinforced by exposure to emails, reports, notices, schedules, and instructions at the workplace. Third, the instructors can think about offering more TOEIC preparation courses, mock tests, and strategy-based training to enhance the confidence and readiness of students to standardized assessments of English proficiency. Lastly, to guarantee that the learning outcomes fulfil the future communication requirements of graduates in workplaces, curriculum designers should consider aligning the instruction of vocational English with internationally-recognized proficiency standards including TOEIC. There are a number of limitations associated with this study. To begin with, the research was conducted on a relatively small sample that was selected at a single vocational higher education institution, which could be a limitation to the overall generalizability of the findings to wider contexts. Second, the sample sizes of the two groups were not equal which might have affected statistical balance in spite of the strength of the procedures selected. Third, the research depended on a prediction test of the TOEIC appraisal instead of an authentic TOEIC test. Thus, the scores are to be regarded as the estimates of proficiency, but not as the final results of certification. Lastly, the research design used a cross-sectional design that used one-time testing data. It is suggested that future studies be conducted with larger multi-institutional samples, official TOEIC scores, and longitudinal designs to study proficiency development over time.

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