

Behind the Scores: In Search of the Predictive Validity of O-NET Scores to Academic Achievements of English Major Students

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Received 18 July 2019; revised 12 August 2019; accepted 20 August 2019;

online 30 August 2019

Abstract

Ordinary National Educational Test (O-NET), a high-stakes test, is used for the purpose of accountability in Thai educational system, evaluating academic performance of students and a gate-keeper to recruit prospective candidates into certain programs of universities in Thailand. Even though the test has been widely used to serve the latter, there is a need for empirical evidence to prove its predictive validity and to investigate lecturers' attitude towards the O-NET. This study investigated 1) the relationship between O-NET scores and academic achievements, 2) its predictive validity and 3) lecturers' attitudes towards the use of the O-NET for recruiting students into an English major program of a public university in Thailand. The samples were the O-NET scores in foreign language (English) and academic achievements from academic years 2010 to 2014. Nine lecturers were purposively selected to participate in the semi-structured interview. The

results demonstrated that the O-NET score was related to academic achievements and could predict academic achievements of English major students. Moreover, the lecturers believed that the O-NET was an effective instrument for recruiting students to English major program.

Keywords: O-NET, Language assessment, Predictive validity, High-stakes testing, Academic achievements

1. Introduction

The Ordinary National Educational Test (O-NET) is a high-stakes test used for the purpose of accountability for the educational system in Thailand and also for evaluating the academic performance of students at Grades 6, 9 and 12 in Thailand's public schools. The O-NET in foreign language (English) for the twelfth grade is meant to assess the following areas and skills: 1) language for communication; 2) language and culture; 3) language and other subject group relationships; and 4) language, community and work relationship (NIETS, 2009). It is also used to measure language proficiency, assure quality of education and be one of the criteria for undergraduate admission. This study focused on the significance of O-NET as a gate-keeper for recruiting prospective students to an English major program. The O-NET score in a foreign language subject (English) was a requirement for admission based on the assumption that the score of the test provides meaningful inferences on the test-takers' language ability. Thus, it is assumed that the test-takers with an appropriate score would have enough English language proficiency to study in the program.

However, to date, the use of the O-NET score as a gate-keeper remains doubtful. First, there is inadequate evidence to prove the gate-keeper function of O-NET in foreign language (English) even though the test score had been used as a criterion to recruit prospective students to any program, especially for English majors for over a decade. Even though a number of researchers investigated the relationship between high-stakes tests in Thailand and academic achievement (Krungsanmuang, 2006; Sanguanrungsirikul, 2011; Wittaya-u-dom, 2012; Meetess, Iramaneerat, & Thongprong, 2013; Arwae, Premprat, & Phincharean, 2014; Ngamsuntikul, 2015), their results are inconclusive in relation to the gate-keeper function of the O-NET. In some academic fields such as Nursing and Agricultural Science, the results demonstrated that the test scores correlated with academic achievement of graduates but were not statistically significant (Meetess, Iramaneerat & Thongprong, 2013, Wittaya-u-dom, 2012). Even though some researchers (Krungsanmuang, 2006; Sanguanrungsirikul, 2011; Ngamsuntikul, 2015) found that the test scores significantly correlated with academic achievements, the relationships were different in each academic context and each academic year. Second, there was a lack of stakeholders' justification in setting a cut-off point of the O-NET score for recruiting students to a certain program. Teachers were affected by the requirement of the cut-off point. They had to plan their instruction to best serve these students admitted to the program. Therefore, it was important to examine their attitudes towards the use of the O-NET as a gate-keeper and the appropriateness of the cut-off point.

The purposes of the study were to investigate the relationship between O-NET scores and academic achievements of English major students, the predictive validity of the test, and lecturers' attitudes towards the use of the 75 percent cut-off point of the O-NET scores in recruiting English major students.

The research questions of the present study were:

1. Is there a relationship between O-NET scores in foreign language (English) and academic achievements of English major students? If so, what is the relationship between O-NET scores in foreign language (English) to academic achievements?
2. Can O-NET scores in foreign language (English) effectively predict academic achievements of English major students?
3. What are lecturers' attitudes towards the use of the 75 percent cut-off point of O-NET scores for recruiting students to the English major program?

2. Theoretical Framework

The theoretical framework was presented in the following sequence: the issue of predictive validity and a review of previous studies on predictive validity of high-stakes and standardized tests. Predictive validity is defined as the ability of a test to predict an individual's future performance, especially academic achievement (Hughes, 2010; Drost, 2011; Cronbach, & Meehl, 1955). The most common use for predictive validity is inherent in the process of decision-making in recruiting students into certain programs of universities. Generally, most universities use scores of a test

to recruit students to a certain program, with an attempt to find appropriate students having specified qualifications and meeting the criteria. In this process, the basic assumption of using a certain test score as a criterion is that a candidate with a high test score will have potential and a high possibility to become academically successful in the program.

Based on the review of the previous studies on predictive validity of high-stakes and standardized tests to academic achievements, two issues emerged. First, studies of predictive validity in Thailand were conducted to investigate the prediction of high-stakes tests such as Entrance exams, O-NET, A-NET, GAT and PAT to academic achievement for science disciplines such as Engineering, Nursing, Mathematics and Computer Science (Sanguanrungrasirikul, 2011; Meetess, Iramaneerat & Thongprong, 2013; Ngamsuntikul, 2015). Unfortunately, studies on the predictive validity of high-stakes tests, especially relating O-NET to academic achievements in more linguistically demanding academic disciplines such as English in Thailand are scant and too limited to establish the empirical evidence for its predictability. In 1992, Getkham conducted a study to determine the relationship between University Entrance Examination in English and academic achievement of first-year undergraduates. Yet, no study was conducted to investigate the relationship between O-NET on English and academic achievement. The other concern was that the degree of correlation coefficient between the predictor and the criterion varied from weak correlation to strong correlation. In the following studies, English language proficiency was used as a predictor, but the criterion was varied from the GPA of the first semester (Krungsanmuang, 2006;

Sanguanrungrsirikul, 2011), the GPA of the first two semesters (Ngamsuntikul, 2015) to the cumulative grade point average (Meetess, Iramaneerat & Thongprong, 2013). Findings showed that the correlation between the predictor and the criterion was strong when the criterion was the GPA of the first semester (Krungsanmuang, 2006; Sanguanrungrsirikul, 2011) and that the correlation was found to be weak to moderate when the criterion was the cumulative grade point average (Wittaya-u-dom, 2012; Meetess, Iramaneerat & Thongprong, 2013).

In summary, the results of previous research on the predictive validity of English proficiency tests to academic achievements are inconclusive; therefore, better understandings of the complexities and nuances of these relationships between test scores and academic achievements are needed.

3. Research Methodology

3.1 Sample

The sample in the current study consisted of the O-NET scores in foreign language (English) (predictor variable) and academic achievement (criterion variables). Three criterion variables were considered as academic achievements: accumulative grade point average (GPAX), English major grade point average (EG grade) and grades of the three fundamental courses of an English major program (Reading for Information course, Paragraph Writing course, and Listening-Speaking 1). The data were obtained from the Registrar's office and the Department of English from the academic years 2010-2014.

3.2 Participants

Nine lecturers from the Department of English in a public university in Bangkok participated in this study. The participants were purposively selected based on their working experience and their roles in the recruiting process. First, all participants had experience teaching at least one of the three fundamental courses for English major students. Second, all of the participants had more than 5 years of teaching experience in the Department of English during the academic years 2010 to 2017. Last, the participants were familiar with the recruitment process and needed to have one of the following roles in the recruiting process such as head of the department, committee members or interviewers recruiting students into the program.

3.3 Setting

The study was conducted in a bachelor's degree program in English at a public university in Bangkok. Both Thai and English were languages of instruction. In order to complete the program requirement, English major students were required to achieve 138 credits comprising of general education courses, core courses (major courses and minor courses), and free electives. Each year, all English major students were admitted through the central admissions run by the Office of Higher Education Commission, and the prospective students had to meet specific criteria. The criteria consisted of 3 parts. First, the prospective students had to complete a secondary school (or equivalent) course from an accredited school with a GPA of 2.75 in order to apply for the program. Second, they had to take two high-stakes tests (GAT and O-NET) and earn satisfactory scores. Candidates were required to get at least the score of 75 on

the O-NET in foreign language (English) in order to be admitted to the program. Last, they had to go through an interview for admission. 70 students were admitted to the program each year.

3.4 Research Instruments

The interview was used in examining the participants' attitudes towards and insight about the cut-off point of the O-NET scores used for recruiting students to the English major program. Ten interview questions were asked and examined four main issues: their teaching experience, their roles in recruiting students, their attitudes towards the current cut-off point and the effectiveness of O-NET as an instrument to recruit students to the English major program.

3.5 Data Analysis

To examine the relationship between the O-NET scores in foreign language (English) and academic achievements of English major students, correlation analysis was implemented. Correlation analysis is a method of statistical evaluation that measures the strength of relationship between two variables and the direction of the relationship (Cohen, Manion, & Morrison, 2011). The process of correlation analysis includes calculating descriptive statistics of the variables and examining Pearson product-moment correlation coefficients.

To investigate predictability of the O-NET score on multiple measures of academic achievements, a multivariate multiple regression analysis was employed. Multivariate multiple regression analysis is the method of modeling multiple responses, or dependent variables, with a single set of predictor variables (Johnson, & Wichern, 2002). The process of multivariate multiple

regression analysis includes: analyzing Wilks' lambda, coefficient of determination (R^2) and Beta standardized regression coefficients (β). Wilks' lambda is, "a multivariate index of association that represents the strength of the relationship between a single grouping variable and multiple attribute variables" (Hatcher, 2013, p. 309). The coefficient of determination (R^2) shows a predictability value that indicates the percentage of variance in academic achievement variables accounted for by the predictor variable. Beta standardized regression coefficients (β) indicate the strength of the effect of the O-NET score on academic achievements in units of standard deviation.

To examine lecturers' attitudes towards the use of the O-NET scores as a criterion to recruit students to the English major program, content analysis was used to analyze the data from semi-structured interviews. Content analysis is a research tool used to determine the presence of concepts in qualitative data. It can be used to analyze the presence, meanings and relationships of concepts resulting in the possibility to make inferences about the messages within the interview (Cohen, Manion, & Morrison, 2011)

4. Results and Discussion

The results were grouped and described in order of the research questions.

4.1 The relationship between O-NET scores in foreign language (English) and academic achievements of English major students

Table 1

Descriptive Statistics of the O-NET Score and Academic Achievements

<i>Variables</i>	<i>N</i>	<i>Mean</i>	<i>Min</i>	<i>Max</i>	<i>SD</i>
O-NET	303	74.78	61.43	91.00	6.41
GPAX	303	3.28	2.41	3.83	0.29
EG	303	3.31	2.38	3.88	0.30
grade					
Fund.	303	3.33	2.29	4.00	0.33
grade					

The results revealed that students' average score on the O-NET test was 74.78 (SD = 6.41) with a range of 61.43 to 91.00. The following are the averages of the three academic achievements. First, the average of accumulative grade point average (GPAX) was 3.28 (SD = .29) with a range of 2.41 - 3.83. Second, the average of English major grade point average (EG grade) was 3.31 (SD = .30) with a range of 2.38 - 3.88. Lastly the, grades of the three fundamental courses of English major program (Fund.) was 3.33 (SD = .33) with a range of 2.29 - 4.00.

Table 2

Correlations among O-NET Scores and Academic Achievements

	<i>GPAX</i>	<i>EG grade</i>	<i>Fund. grade</i>
<i>O-NET</i>	0.21*	0.31*	0.34*

* $p < .01$

An examination of the Pearson product-moment correlation coefficients in Table 2 shows the correlations of the O-NET scores to the number of academic achievement variables. The O-NET scores had positive and statistically significant correlations with other academic achievement variables including accumulative grade point average (GPAX), English major grade point average (EG grade) and grades of the three fundamental courses of English major program (Fund.). The results showed that the correlations ranged in size from .21 to .34, suggesting that the predictor had weak to moderate positive correlations with the academic achievement variables.

However, it is important to discuss the reason why amongst the three academic achievement variables, the O-NET score had the strongest relationship with grades of the three fundamental courses of English major program (Fund.). The possible explanation for the result may be due to the consistency between what was tested in the O-NET and what was taught and tested in the three fundamental courses. The O-NET in English subject is meant to indirectly measure students' speaking, writing and reading comprehension skills. Similarly, the three fundamental courses of

the English major program focused on developing students' basic listening-speaking, writing and reading skills which were quite consistent with what was tested on the O-NET. Therefore, it is very likely that grades of the three fundamental courses of the English major program reflected similarly to the language skills measured by the O-NET, leading to the strongest positive relationship of the O-NET and grades of the three fundamental courses, one of which are criterion variables.

Therefore, there is a relationship between O-NET scores in foreign language (English) and academic achievements of English major students. The findings also revealed weak to moderate relationships between the O-NET scores in foreign language (English) and academic achievements.

4.2 The predictability of the O-NET score on multiple measures of academic achievements

Table 3

Multivariate Multiple Regression of the O-NET scores on Academic Achievements

Multivariate Statistics and F Approximations							
				<i>F</i>	<i>df</i>		
Wilks' Lambda = .113*				12.70	3/299		
ACH	P a r a -	Beta	t	ANOVA			
	meter			<i>F</i>	<i>df</i>	<i>R</i> ²	<i>R</i> ² _{<i>a</i>} <i>df</i>
GPAX	O-NET score	.009	3.73*	13.89*	1/301	.04	.04
EG grade	O-NET score	.014	5.68*	32.25*	1/301	.10	.09
Fund. grade	O-NET score	.017	6.16*	37.95*	1/301	.11	.11

*p< .01

For further assessment, the predictability of the O-NET scores to academic achievements of English major students was investigated by regressing achievements on the O-NET scores. In the analysis of multivariate multiple regression, the O-NET score was used to predict academic achievements of English major students. Specifically, the model includes: 1) the O-NET scores as predictor variable and 2) accumulative grade point average (GPAX), English major grade point average (EG grade) and grades of the three fundamental courses of the English major program (Fund.) as

criterion variables as shown in Table 3. The results showed that Wilks' lambda was statistically significant ($\lambda=.113$, $F(3, 299) = 12.70$, $p < .01$). It was concluded that the O-NET score is a statistically significant predictor of one or more dependent variables. Consequently, the result indicated that there was a relationship between the O-NET score and the linear combination of the three achievement variables.

In addition, as seen in Table 3, the O-NET scores accounted for variance in the accumulative grade point average (GPAX) variable ($R^2 = 0.04$, $F(1, 301) = 13.89$, $p < .01$), the English major grade point average (EG grade) variable ($R^2 = 0.09$, $F(1, 301) = 32.25$, $p < .01$) and the grades of the three fundamental courses of English major program (Fund.) variable ($R^2 = 0.11$, $F(1, 301) = 37.95$, $p < .01$). These results suggest that approximately 4 percent of accumulative grade point average (GPAX) variance, approximately 9 percent of English major grade point average (EG grade) variance, and approximately 11 percent of the three fundamental courses of English major program (Fund.) variance are predictable on the basis of the O-NET score, as a predictor. Hence, the O-NET score is a better predictor of grades of the three fundamental courses of English major program (Fund.) than the English major grade point average (EG grade) and the accumulative grade point average (GPAX).

To compare the relative contribution of the O-NET scores, standardized regression coefficients (β) were calculated. The value of the coefficients revealed that, for every one-unit increase in the O-NET score, there was an increase of .009 units in the GPAX, an increase of .014 units in the English major grade point average,

and an increase of .017 units in the grades of the three fundamental courses. This result indicated that the O-NET score made a slight contribution to the prediction of accumulative grade point average (GPAX), English major grade point average (EG grade) and grades of the three fundamental courses of the English major program (Fund.). It is also suggested that, of the three academic achievements, the O-NET score appeared to make the greatest relative contribution in both of the grades of the three fundamental courses of the English major program (Fund.) and English major grade point average (EG grade).

The analysis of multivariate multiple regression granted the prediction equation, predicting accumulative grade point average (GPAX), English major grade point average (EG grade) and grades of the three fundamental courses of the English major program (Fund.) from the O-NET scores. Thus, the predictive validity of the O-NET scores was established. It is important to discuss the modalities among the three academic achievements variables, the O-NET score was considered an effective predictor for both the grades of the three fundamental courses of English major program (Fund.) and English major grade point average (EG grade). It is due to the consistency between what was tested in the O-NET and what was taught and tested in the three fundamental courses as mentioned in Table 4.1, including the English major courses. While the O-NET was meant to assess students' speaking, writing and reading skills, the grades of the three fundamental courses in the English major program including the English major courses showed students' English language proficiency. Similarly, Getkham's study in 1992 found that among different predictors, University Entrance

Examination in English was the best predictor to indicate the students' achievement in fundamental English courses for first year students. In addition, it is due to the consistency between content areas meant to be tested in the O-NET and those in the English major courses. For O-NET in foreign language (English), the areas and skills assessed were: 1) language for communication, 2) language and culture, 3) language and other subject group relationship and 4) language, community and work relationship (NIETS, 2009). The English major program offered a wide range of courses which tapped into the content areas to be taught and to be measured in the O-NET. For example, the following courses in the English major program were related to the content areas and also similar to the third content area (language, community and work relationship) in the O-NET (NIETS, 2009). For example, the Business Writing course, English for Hotel Personnel, and English for Business Organization. In addition, some courses in the English major program included the content areas similar to the second content area (Language and culture) in the O-NET such as Intercultural Communication, Literature, Readings in Arts and Culture. Consequently, this accounted for the predictability of the O-NET score on both grades of the three fundamental courses of English major program (Fund.) and English major grade point average (EG grade).

However, it is noticeable that the O-NET score was not considered as an effective predictor of the accumulative grade point average (GPAX) consisting of grades derived from English courses and non-English courses such as general education courses (Integrated Humanities, Integrated Social Sciences, General Concept of Computer, etc.). Some minor courses which were significantly

irrelevant to English, but were tested in the O-NET were also included.

Therefore, to answer the second research question, O-NET scores in foreign language (English) can predict academic achievements of English major students especially grades of the three fundamental courses of the English major program and grades of the English major courses.

4.3 Lecturers' attitudes towards the use of O-NET scores as a criterion to recruit students to the English major program

Table 4

Lecturers' Attitudes towards the Use of the O-NET Score in Recruiting Students

Attitudes towards	Details	Percentage
The appropriateness of the cut-off point	• Appropriate at 75	44
	• Appropriate at lower than 75	34
	• Appropriate at higher than 75	22
The effectiveness of the instrument	• Effective (with conditions)	78
	• Ineffective	22
More effective recruiting instrument	• Supplement of productive skills	78
	• Using other standardized tests	22

Lecturers' attitudes towards the use of O-NET scores as a criterion for the recruitment of students into the English major program are as follows.

4.3.1 Appropriateness of implementing 75 cut-off point

The results in Table 4 show that forty-four percent of the participants believed that 75 percent cut-off point was appropriate whereas thirty-four percent of the participants believed that the cut-off point of lower than 75 percent was appropriate. Twenty-two percent believed that the cut-off point of higher than 75 percent was appropriate. To begin with the first group, they believed that the current 75 percent cut-off point of the O-NET score was an expected level of English language proficiency for English major candidates who were admitted to the English major program. Students with their ONET scores of 75 percent and higher were proficient in English enough to study in the program successfully. The participants believed that they could work with the students and help develop the students to become graduates who were highly competent in English, in line with the market demand and the goal of the curriculum. To illustrate this, consider Teacher 05's and Teacher 07's explanations for their agreement with the current 75 percent cut-off point:

"75 percent is a good base. If we compare with letter grades, 75 is B or C+ so it is acceptable. 75 is the average and we believe that they can improve with their current background knowledge." (Teacher 05)

“It’s ok to set 75 percent as a minimum threshold because we have to handle a lot of gap between the students’ current ability and the expected ability when entering the program. If we set lower cut-off point, it will be difficult for both the students and the teachers.” (Teacher 07)

For the second group, thirty-four percent of the participants believed that the appropriate cut-off point should be lower than 75. The main reason for lowering the current cut-off point was the issue of marginalization. Marginalization referred to the process of pushing a particular group of candidates to the edge of the program by not allowing them a place in the English major program. The candidates who had O-NET scores lower than 75 were not qualified to be admitted into the English major program, so they had to choose other majors which did not fulfill their need and had to suffer studying in the program for 4 years. Thus, some participants believed that setting 75 percent cut-off point would limit candidates’ opportunities to study in the English major program. To illustrate this, Teacher 01 and Teacher 06 expressed their reasons for lowering the current 75 percent cut-off point:

“I mean my concerns are the students. They would be the victims. I cannot say for sure that we should maintain that 75 breakdown score, our consideration is based upon the previous years...” (Teacher 01)

“Personally, I don’t think it’s a good place to set the score at 75 because you limit the students. So, you may eliminate the

one who could have grown, the one you could have helped, you could have cultivated...” (Teacher 06)

Additionally, twenty-two percent of the participants believed that it was important to raise the bar higher. The participants in this group believed that the appropriate cut-off point should be higher than 75 percent. These participants believed that candidates needed to have strong English language background and be competent enough to study in the classroom where English was the medium of instruction as can be seen from Teacher 02’s comment.

“I would say for the English major if I can choose, I want it to be a little bit higher than 75. They need to be outstanding. And we prefer to have students who are quite equipped with those skills so that we can train them or work with them further rather than just like go over the basic things.” (Teacher 02)

Thus, to sum up the first issue of appropriateness of the 75 percent cut-off point of O-NET scores in recruiting English major students, the majority of the participants believed that 75 percent or higher was an appropriate cut-off point to recruit students to the English major program. It can be concluded that the 75 percent or higher was an appropriate cut-off point. According to the Ministry of Education Announcement on Undergraduate Qualifications Standards English Language in 2017 (standards of learning and language knowledge of undergraduates from Bachelor of Arts in English), any graduates of the program had to attain English language proficiency of equivalent levels C1 (Proficient User) in

accordance with international standards of the Common European Framework of Reference for Languages (CEFR). First, it could be explained that any candidates who would be qualified to get admitted into the program needed to be proficient in English enough to study in the program which English was a medium of instruction. Candidates were required to study in the program at least 7 (regular) semesters and no more than 14 (regular) semesters. Within the limited timeframe, the students needed to become highly competent in English and attain C1. Hence, candidates with the O-NET score lower than 75 percent, and with the low English proficiency, would have difficulties studying in the program and would not be able to reach level C1 (Proficient User) within approximately 4 academic years. Therefore, the 75 percent cut-off point of the O-NET score or higher was appropriate.

4.3.2 The effectiveness of the O-NET for recruiting students into the program

As can be seen in Table 4, the results showed that 78 percent of the participants believed that the O-NET was an effective instrument for recruiting students into the program whereas twenty-two percent of the participants believed that the O-NET was not. To begin with, most of the participants believed that practicality was the most significant issue for the use of O-NET. The participants believed that it was practical and appropriate to use the O-NET score as a criterion for recruiting students. All Grade 12 students were required to take the O-NET test once a year, and the test fee was not too costly. The department did not have to handle generating a screening test, administering the test and marking the test as can be seen in Teacher 03's and Teacher 08's comments.

“It’s okay, in terms of number of students because we have to recruit the students from all over the country so this would be an easy method... So, O-NET is okay in terms of management.”
(Teacher 03)

“O-NET is practical because first it’s not too expensive ideally, a lot of students can afford O-NET. Second, in terms of the analysis, they use machine to process so there is consistency of marking the exam. Not subjective...” (Teacher 08)

Most of the participants believed that with its practical value, it was appropriate to use the O-NET to recruit candidates to the English major program.

4.3.3 To maximize the effectiveness of recruiting students into the program, the O-NET scores should be supplemented with other measures

All of the participants believed that to make well-informed decisions about recruiting English major candidates, the information granted from the O-NET score did not provide a complete picture of a candidate’s English proficiency. It should be supplemented with information from other alternative measures such as other standardized tests or tests that measure candidates’ productive skills. The combination or supplement with alternative instruments should include: 1) other standardized tests such as General Aptitude Test (GAT) in English, IELTS and TOEFL or 2) the supplements of productive skill test such as a speaking test, an interview, a written exam or even a screening test generated by the department.

Teacher 01's and Teacher 04's comments suggested their idea on supplementing the O-NET score with alternative recruiting instruments:

"The ideal is to use standardized test (O-NET) together with something else to evaluate students' language accuracy and fluency at the same time" (Teacher 01)

"I think we could include the O-NET in the criteria, but we also have other ways to recruit them as well. For example, the interview to see their characteristics and also their personality" (Teacher 04)

Therefore, to answer the third research question, the 75 percent cut-off point or higher was appropriate, and the O-NET score was an effective instrument to recruit students to the English major program. Moreover, the results showed that even though the participants believed that the O-NET was an effective instrument for recruiting, the O-NET score did not provide teachers with adequate information about the students' English proficiency since the O-NET which was an indirect test by nature and was in a multiple choice format. For example, the test did not provide much detailed information about candidates' English proficiency but granted only a single number on the test. Besides, the O-NET did not provide information about candidates' productive skills such as speaking and writing. Therefore, to make a well-informed decision about recruiting candidates into the English major program, the O-NET score needed to be supplemented with other alternatives which could provide information about the candidates' speaking and

writing abilities. The recruiting committee might consider interviewing candidates in English to measure their speaking ability or ask them to submit a writing sample in order to get a complete picture of candidates' English proficiency.

5. Conclusion

High-stakes tests have impacts on students' academic achievements. This study investigated the relationship between O-NET scores in foreign language (English) and academic achievements of English major students, the predictability of each variable and lecturers' attitudes towards the use of O-NET scores as an instrument to recruit students to an English major program. In conclusion, first, the O-NET score in foreign language (English) was related to academic achievements of English major students. The results from correlation analysis showed that the correlations between O-NET scores and academic achievements (accumulative grade point average, English major grade point average and grades of the three fundamental courses of English major program) appeared to approach statistical significance. This means that there was a relationship between O-NET scores in foreign language (English) and results indicated small to medium correlation effect size. Second, the results from multivariate multiple regression analysis showed that O-NET scores in foreign language (English) could predict academic achievements of English major students. The study showed that the O-NET score accounted for 11 % of the variance in grades of the three fundamental courses of the English major program; therefore, O-NET scores could also predict academic achievements of English major students especially grades of the three fundamental

courses of the English major program (Fund.). Last, the lecturers believed that the O-NET score was an effective instrument to recruit students to the English major program; however, the administrators in the department could use the O-NET score to recruit English major candidates more effectively with supplemental information from other assessments.

6. Implications

The results of this study promote the application of O-NET as an effective recruiting instrument. The results showed that the O-NET scores in foreign language (English) can be used as a gate-keeper to recruit students to any English major program. However, in order to recruit students to the program more effectively, other assessments should be used in order to provide additional information about the candidates' English proficiency such as: General Aptitude Test (GAT) in English, speaking test, interview, writing test, and writing samples. The use of O-NET, together with other assessments, can make the recruitment process more effective and reliable. The study also revealed that practicality was the important factor for the test users' decision to use the O-NET since they encountered time constraints for recruiting candidates and were concerned about candidates' accessibility to and expense of the test. The test users were aware of the weakness of the O-NET. Thus, getting additional information from other assessments could make the use of the O-NET for recruiting candidates to the English major program more effective.

7. Limitations

The generalizability of the results may be limited because of the following factors:

1. This study was limited by the quantity of the data since the study was conducted based on the score of O-NET tests from only 5 academic years. The O-NET scores used in this study were the O-NET scores from 2010 to 2014, which were officially obtained from the Registrar's office and the Department of English at a public university in Bangkok. Thus, it is recommended that further studies should investigate a larger size of data in order to explore the relationship and predictive validity more effectively.
2. In order to investigate the relationship between O-NET scores and academic achievements, the sample in the current study was limited to English majors in one university where the researcher had access. It focused on a specific context and a certain group of students. Generalization may not hold for different groups of the students in different contexts (e.g. geographical locations of universities and major) in which the dynamics of the relationship and predictive validity value may be different. More research conducted with different contexts to test the generalization of the relationship between O-NET scores and academic achievements is needed.

References

- Arwae, P., Premprat, M., & Phincharean, P. (2014). Relationship among secondary education's learning achievement, examination score, university education's learning achievement, and academic achievement graduates at prince of Songkla University, Pattani Campus (Academic year 2003-2007). *Songklanakarin journal of social sciences and humanities*, 20(2), 245-272.
- Bachman, L. F., & Palmer, A. S. (2010). *Language assessment in practice*. Oxford, England: Oxford University Press.
- Bailey, K. M. (1996). Working for washback: A review of the washback concept in language testing. *Language Testing*, 13(3), 257 - 279.
- Borg, W. R., & Gall, M. D. (1989). *Educational research: An introduction* (5th ed.). New York, NY: Longman.
- Brown, D., & Abeywickrama, P. (2010). *Language assessment, principles and classroom practice* (2nd ed.). New York, NY: Pearson.
- Brown, J., & Rodgers, T. (2002). *Doing second language research*. Oxford, England: Oxford University Press.
- Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological Bulletin*, 52(4), 281-302. doi:10.1037/h0040957
- Cohen, L., Manion, L., & Morrison, K. (2011). *Research methods in education*. New York, NY: Routledge.
- Coleman, J. S. (1969). *Equality and achievement in education*. Boulder, CO: Westview Press.

- Coombe, C. A., Davidson, P., O'Sullivan, B., & Stoyhoff, S. (2012). *The Cambridge guide to second language assessment*. Cambridge, UK: Cambridge University Press.
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative and mixed methods approaches* (2nd ed.). Thousand Oaks, CA: Sage.
- . (2009). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Saddle River, NJ: Pearson.
- Daller, M., & Phelan, D. (2013). Predicting international student study success. *Applied Linguistics Review*, 4(1), 173-193.
- Dooye, P., & Rhonda O. (2002). An investigation into the predictive validity of the IELTS Test as an indicator of future academic success. *Prospect*, 17(1). 36–54.
- Doye, P. (1991). Authenticity in foreign language testing. In S. Anivan (Ed.), *Current developments in language testing*. Singapore: SEAMEO Regional Language Centre, 103–10.
- Drost, E. A. (2011) Validity and reliability in social science research. *Education Research and Perspectives*, 38(1), 105- 123.
- Farah, Y. (2013). Through another's eyes: Modification or accommodation in standardized testing?. *Gifted Child Today*, 36(3), 209-212.
- Fraenkel, J. R., & Wallen, N. E. (2007). *How to design and evaluate research in education*. New York, NY: McGraw-Hill Education.
- Getkham, K. (1992). Relationships among the results of the university entrance examinations in English, of the English placement test and of the foundation English achievement

- tests of Kasetsart freshmen in 1989 and 1990. *Proceedings of the 31st Kasetsart University Annual Conference: Home Economics, Science, Engineering, Agro-Industry, Economics and Business Administration, Education, Humanities, Natural Resources and Environmental Economics*, 14(2), 528-526.
- Graham, J. G. (1987). English language proficiency and the prediction of academic success. *TESOL Quarterly*, 21(2), 505-521.
- Phelps, P. R. (2005). *Defending standardized testing*. Mahwah, NJ:United States: Lawrence.
- Harmer, J. (2007). *The practice of English language teaching*. Harlow, England : Pearson.
- Harris, P., Smith, B., & Harris, J. (2011). *The myths of standardized tests: Why they don't tell you what you think they do*. Maryland, United States: The Rowman & Littlefield.
- Harrison, A. (1991). *A language testing handbook*. (5th ed.). London, England: Macmillan.
- Hatcher, L. (2013). *Advanced statistics in research: Reading, understanding, and writing up data analysis results*. Saginaw, MI: Shadow Finch Media, LLC.
- Healey, J. F., Prus, S. G., & Lieflander, R. (2019). *Statistics: A tool for social research*. Toronto, Ontario: Nelson.
- Henry, P. (2007). The case against standardized testing. *Minnesota English Journal*, 43, 39-71.
- Herman, L. J. & Golan, S. (1993). Effects of standardized testing on teachers and learning. *Educational Measurement: Issues and Practice*, 38(2),20-25.

- Huck, S. W. (2014). *Reading statistics and research*. Harlow, England: Pearson.
- Hughes, A. (2010). *Testing for language teachers*. Cambridge, UK: Cambridge University Press.
- Johnson, R. A., & Wichern, D. W. (2007). *Applied Multivariate Statistical Analysis* (6th ed.). New York, NY: Pearson.
- Krungsaenmuang, M. (2006). *A prediction of learning achievement of Chulalongkorn University students admitted through the central university admission system* (Master's thesis). Chulalongkorn University, Bangkok, Thailand.
- Lee, Y. J., & Greene, J. (2007). The predictive validity of an ESL placement test, *Journal of Mixed Methods Research*, 1(4), 366–389.
- Light, L. R., Xu, M., & Mossop, J. (1987). English proficiency and academic performance of international students. *TESOL Quarterly*, 21(2), 251–261.
- McNamara, T. (2000). *Language testing* (2nd ed.). Oxford, UK: Oxford University Press.
- Meetess, S., Iramaneerat, C., & Thongprong, S. (2013). Predicting academic achievement of students in the nursing assistant certificate program, Faculty of Medicine Siriraj Hospital, Mahidol University. *Siriraj Medical Journal*, 6(2), 76-84.
- Messick, S. (1996). Validity and washback in language testing. *Language Testing*, 13, 241-256.
- Mihaela, V., & Alina-Oana, B. (2015). (When) Teachers' pedagogical beliefs are changing? *Procedia-Social and Behavioral Sciences*, 180, 1001-1006. doi:10.1016/j.sbspro.2015.02.191

- Ngamsuntikul, R. (2015). A prediction of learning achievement of department of mathematics, Faculty of Science, Srinakharinwirot University students admitted through direct examination. *Journal of Research on Science, Technology and Environment for Learning*, 6(2), 127-140.
- Thomas, M. (2013). Teachers' beliefs about classroom teaching –teachers' knowledge and teaching approaches. *Procedia-Social and Behavioral Sciences*, 89, 31-39. doi:10.1016/j.sbspro.2013.08.805
- Poovudhikul, V. (2013). *The effects of the Thai college admissions system on private tutoring expenditure, income and achievement disparities*. (Master's thesis). Stanford University, CA, United States of America. Retrieved from https://economics.stanford.edu/sites/default/files/publications/venussapoovudhikulhonors_thesis-may2013.pdf
- Ritchey, F. (2000). *The statistical imagination: Elementary statistics for the social sciences*. New York, NY: The McGraw-Hill.
- Richard, J. C. (2001). *Approaches to evaluation: Curriculum development in language teaching*. Cambridge, UK: Cambridge University Press.
- Sawyer, R. (2013). Beyond correlations: Usefulness of high school GPA and test scores in making college admissions decisions, *Applied Measurement in Education*, 26(2), 89-112, DOI: 10.1080/08957347.2013.765433
- Sanguanrungrasirikul, D. (2011). A prediction of learning achievement of King Mongkut's University of Technology Thonburi Students Admitted Through Central University Admission

- System. *KMUTT Research and Development Journal*, 34, 431-441.
- Spolsky, B. (1985). The limits of authenticity in language testing. *Language Testing*, 2(1), 31-40.
- Van Nelson, C., Nelson, J. S., & Malone, B. G. (2004). Predicting success of international graduate students in an academic university. *College and University Journal*, 80(1), 19–27.
- Weir, C. (1990). *Communicative language testing*. New York, NY: Prentice Hall.
- Woodrow, L. (2006). Academic success of international postgraduate education students and the role of English proficiency. *University of Sydney Papers in TESOL*, 1, 51–70.
- Wittaya-u-dom, W. (2013). A study of the predictive validity of GAT, PAT, O-NET factor scores and GPAX for university admission. *OJED*, 8(1), 1096-1110.