Readiness for Computer-based English Tests among College Students in Regional Thailand

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Abstract

This survey research was conducted to assess Thai regional college students' readiness for taking high-stakes computer-based English tests, which are offered more widely and regularly, in the country. The data were collected from 572 university students in five regions. The questionnaire solicited their opinion regarding readiness in terms of computer skills and English language skills. The computer skills included online registration, using a mouse, typing in English, and operating audio equipment. The English skills consisted of reading, writing, listening, and speaking. It was found that although students were less confident in typing, they possessed high computer skills and could operate the testing equipment with ease. However, their readiness in English language skills was only moderate. Consequently, more intensive English language tutoring must be organized for students in regional colleges and universities so that they are ready for computer-based English tests.

Introduction

In the last decade, computer technology has been seen as playing a significant role in administering and delivering high-stakes English tests in Thailand. Many universities have created the electronic versions of their in-house English tests. For example, Chulalongkorn University launched the Chulalongkorn University Test of English Proficiency (CU-TEP) e-testing. Mahidol University provides its homemade MU GRAD TEST (Computer-based). Chiang Mai University has also offered the Chiang Mai University Electronic Test of English for Graduate Studies (CMU eTEGS). King Mongkut University of Technology, Thonburi has announced the TETET standing for Test of English for Thai Engineers and Technologists, which is completely computer based. In January 2019, Language Institute, Thammasat University (LITU) launched its Computer-Based TU-GET (Thammasat University Graduate English Test) which is claimed to be equated with the TOEFL iBT. These are just some examples of high-stakes English proficiency tests, in addition to the TOEFL iBT and the recently offered IELTS (Computer-delivered). The computer-based English tests and assessment have also been developed at a basic educational level where the National Institute of Educational Testing Service (NIETS) is working to create the e-testing systems for primary-school pupils and high-school students. These phenomena clearly denote that paper-based test versions of many national admission tests and higher-education placement tests may become superseded in the

near future. Yet, according to the National Statistics Organization of Thailand (2017), the number of Thai computer users in 2016 was only approximately 20 million out of 67 million. This means that some of the population may not be prepared to use computers to take the English tests. While computers may offer advantages in facilitating test delivery and scoring, they may reduce access to the test and chance of success among those who are not familiar. Therefore, this research aims to study computer-based testing readiness among Thai college students in in five regions.

Objectives of the Study

The purposes of this research were three-fold. First, the researcher examined students' opinion on their readiness to take a computer-based test in terms of computer skills and English language skills. Second, the researcher compared their readiness based on class standings (freshman, sophomore, junior, and senior). The researcher focused especially on stakeholders who lived in regional areas because they are far from where the computer-based tests are located. The results from this study should contribute ideas and insights into the field of language testing and English as a foreign language.

Literature Review

According to Mishra (2020), computer-based assessment offers copious advantages. In addition to better security than the paper-based, computer-based tests add efficiency and convenience in scalable distribution, accurate grading, stress-free analysis, speedy reporting, and extensive accessibility. The practicality of computer-based tests is substantiated by several testing agencies. Meissner (2017), Vice President for Solutions Services of Prometric, stated that the arrival of CBT and specially-equipped testing labs made more frequent test administrations practical, while preserving the integrity and security of the exam. In March 2018, a webinar on the potential benefits of computer-based assessment (CBA) was conducted in Bangkok by the Network on Education Quality Monitoring in the Asia-Pacific (NEGMAP). This agency is under the administration of the United Nation on Education, Scientific, and Culture Organization (UNESCO). Several prominent scholars discussed current use of CBT around the world. They accentuated the capacities of CBT in recording, analyzing, and using the detailed data to improve education quality. Moreover, CBT can integrate features that evaluate various leaners' skills, like spatio-visual skills and the much-hyped 21st century skills (UNESCO Bangkok Asia and Pacific Bureau of Education, 2018).

As indicated by several research studies (Xin & Narot, 2017; Thadpoothon, 2019; Weerakanto, 2019), Thai schools and colleges have not had sufficient resources to equip young generations of the digital literacy. In 2017, the Digital Economy Promotion Agency (DEPA) surveyed the usage of digital technology in education. The survey covered 923 schools under the Office of Basic Education in both Bangkok and regional areas. The results showed that although 99% of the schools could get access to high-speed Internet, more than half of those schools lacked technicians to support the implementation. While most teachers and students possessed a smart phone, allowing them to enter online communication, there were inadequate computers. This finding reveals that some students might have been deprived of computer skills (Marketing

Oops, 2017). Furthermore, according to a survey conducted by Dhurakij Pundit University in collaboration with the Quality Learning Foundation (Mala, 2017), Thai university graduates had skills gaps in many areas, especially foreign language skills and computer skills. According to Puriwat and Tripopsakul (2020), Thailand 4.0 policy has been introduced to transform the country into a high-income nation through the development with an emphasis on R&D, science and technology, creative thinking, and innovation. Foreign language skills and computer skills gaps can result in slow transitions of the economy. The problem of deficient computer skills is further reported by a survey of a career agency that examined the confidence of 10,000 Thai university students concerning jobs and professions. The agency found that 37 per cent of the students lacked confidence in their language skills, and about 16 per cent showed no confidence in basic computer skills, such as using spreadsheets and word processing (The Nation, 2016). These findings showed knowledge and skill gaps among the Thai millennial generation who are supposed to have capabilities and expertise for high business competitions in the national level, continental markets, and global economies. It could also be inferred from these research studies that since their computer access and skills seemed limited, Thai students might be less experienced with CBT or iBT. When they take an exam to obtain the score for job application, they could possibly end up failing to achieve a passing point in high-stakes English examinations; consequently, this research sought to confirm whether Thai college students in regional areas possess enough computer skills and language proficiency ready for computer-based English tests.

Related Research

In the case of Thailand, computer skills or computer literacy has been studied by many researchers for several decades (Skulkhu 1989; Niyomkar, 2012; Techataweewan & Prasertsin, 2018). Ngampornchai and Adams (2016) conducted a survey to determine students' acceptance and readiness for e-learning in a northeastern Thai university. The data were collected from 84 students on a rural college campus. It was found that most students owned smartphones and notebook computers, but only 23 % owned a desktop computer. Moreover, smartphones were mostly used to connect to the Internet. They were more familiar with social media (Facebook, Twitter), search engines, web-video (e.g., YouTube), text chat, and word processors. They were less familiar with tools such as wiki, forum, video chat, and blog. Chompoochart (2017) explored Thai university students' attitudes toward Internet use in learning English as a second language (ESL). She also investigated students' frequency of Internet use in learning English, perceived computer skills, and factors affecting their Internet use. The participants were 480 Thai English majors and non-English majors enrolled as full-time students at eight large-sized universities both in Bangkok and other regions. Sixteen students were later selected for in-depth interviews. The quantitative results showed that they frequently accessed the Internet at home and encountered limitations due to a large volume of users on the Internet and limited server capacity. They perceived themselves as good at basic Internet applications. Among the Internet using skills, they were most acquainted with searching for information, using instant messaging, and using emails. The interviewed participants reported that computer skills were one of the three factors affecting their Internet use in learning English. Ramsin and Mayhall (2019) conducted a survey to examine whether ESL students in Thailand felt comfortable and confident

using online course management tools. The participants consisted of 856 undergraduate ESL students at a public university in Bangkok. The respondents were requested to complete the questionnaire which featured the the Online Technology Self-Efficacy Scale (OTSES). The results revealed that ESL student participants seemed to have a relatively high level of self-efficacy regarding online learning environments and felt they would be able to positively and suitably operate online learning tools. The results of this survey correspond to the one conducted by Promsri (2019) who examined digital literacy awareness among Thai students. The researcher also compared differences in digital literacy awareness in terms of gender and place of origin (Bangkok VS. Regional areas). The data were collected from sixty undergraduate students at a public university in Bangkok. The survey results showed that students had a high level of digital literacy awareness. Those from Bangkok had similar level of digital literacy awareness to ones from regional areas. However, in another study by Haruehansapong (2019), digital literacy skills of students in a regional university seems only average. The data from the sample group of 1,220 first-year students showed that students had digital literacy scores between 50 to 60%. Digital knowledge of the learners had moderately positive correlation with their average grade. Students in the field of science and technology appeared to have higher scores than those in humanities. They proposed organizing supplementary digital literacy training, providing online learning systems, and improving internet efficiency and unavailability.

In terms of the English language skills for computer-based testing, there have been yearly score reports on the TOEFL iBT and the IELTS. In Thailand, the average TOEFL iBT score in 2018 was 78 (Educational Testing Service (ETS), 2019). Although the average score of Thai test takers was not too low, it was still far less than that of several countries such as Singapore, which scored 98, Malaysia which scored 90, and the Philippines which scored 88. As for the IELTS, a test taker performance report for 2017 showed an average of 5.78 while those from Malaysia scored 6.89; takers from the Philippines scored 6.84, and sitters from Indonesia scored an average of 6.38 (IELTS.org, 2019). This report shows that Thai test takers appeared generally to have insufficient English language skills for a standardized test. Thus, it is reasonable to assess students' readiness by examining the outcome of this survey.

Methods

A survey research method was utilized in this case to examine insights into Thai students' perception of their readiness in taking computer-based English tests. The respondents were enrolled in Thai regional universities. To obtain data from similar numbers of students in each of the five regions, an attempt was made to stratify the samples. Even though they were recruited by convenience sampling, they were proportionately representing their peers in the areas, namely the North, the Northeast, the East, the Central, and the South. Either the researcher or research assistants visited nine higher education institutions in five regions to distribute questionnaires and collected them back.

Participants

Respondents represent college students in five regional areas. Each region had approximately 20% of the total 572. This proportion, although not exactly the same, could aptly

embody the targeted population of Thai university students who were enrolled in provincial areas of the country. The researcher purposively obtained the equivalent data from participants in each territory (113 from the North, 123 from the Northeast, 117 from the East, 102 from the Central, and 117 from the South).

Table 1 presents the number of respondents in different college years. It was found that the quantities are quite different. For example, there were twice as many juniors as freshmen. Moreover, the number of sophomores was almost 5% less than that of the seniors. These rates were a result of random sampling. The researcher and the assistants did not specify the identical number of respondents in each year; therefore, it was clear that these dissimilar proportions were uncontrollable. This percentage data was used to compare readiness among the participants' years.

TABLE 1 Class Standings of Respondents

Years of Study	N	%
1. Freshmen	100	17.5
2. Sophomore	125	21.9
3. Junior	190	33.2
4. Senior	157	27.4
Total	572	100

Data Collection

The data collection was done during the second half of the academic year. The participants were requested to fill out the questionnaire while they were on campus. Although the number of college students enrolled in regional colleges and universities were in the millions, the researcher had obtained 572 valid questionnaire copies. The questionnaire used in this research was constructed based on previous research and theories mentioned in the literature review section. The questionnaire covered four aspects: demographic data, perception of their computer skills, and perception of their English skills. For the computer skills section, they were requested to indicate whether they considered having sufficient computer skills to register for the test, read articles, and answer questions on a screen, use a mouse, and use a keyboard, especially for typing. In the last section of the questionnaire, the researcher examined language skills related to high-stakes computer-based test content. The respondents indicated whether they thought their reading, writing, listening, and speaking skills were up to international standards.

Data Analysis

The statistical analyses used were mean, standard deviation, analysis of variance, Student's t-test, and a Pearson product-moment correlation coefficient. Respondents' perceptions on readiness in computer skills and English skills were measured on a Likert sale of 1 to 4. One meant low, and four meant very high. For the data interpretation, mean scores between one and 1.50 indicated low level of readiness, 1.51 and 2.50 showed moderate level., 2.51 and 3.50 meant high level, and 3.51 to 4.00 meant very high level.

Results

The results are reported in two main groups of data. The first part is the descriptive data on readiness in using computer for an English test and readiness in English language skills. The second part presents inferential statistics deriving from using the analysis of variance (ANOVA) to compare readiness in using computer among class standings, and readiness in English among class standings. Finally, a correlation analysis between computer skills and English skills was conducted and reported.

TABLE 2 Self-perceived levels of computer skills

Readiness in Computer Skills	M	S.D.	Meaning
1. Filling in personal data and register online for the CBT.	2.98	.559	High
2. Using a headphone and adjust audio level on computer.	3.14	.657	High
3. Listening and responding to questions on a computer.	2.82	.652	High
4. Reading and do the test on a computer for 2 to 4 hours.	2.65	.743	High
5. Using a microphone to record voice on a computer.	2.70	.720	High
6. Use a mouse to click and drag words or graphic.	3.16	.670	High
7. Using a keyboard to cut, paste, delete, enter, etc.	3.16	.685	High
8. Typing speedily in English	2.76	.701	High

In Table 2, the result concerning computer skills is displayed. It was found that college students in the regional areas were confident about their computer skills. They appeared highly skilled in using a keyboard, a mouse, and a headphone set. When these skills were compared however, it was found that they were less skillful in reading on screen, using a microphone to record voice, and typing in English.

TABLE 3 Self-perceived levels of English language skills

English Language Skills	M	S.D.	Meaning
1. My English-reading skills are at the international level.	2.13	.673	Moderate
2. My English-listening skills are at the international level.	2.14	.660	Moderate
3. My English-speaking skills are at the international level.	2.09	.640	Moderate
4. My English-writing skills are at the international level.	2.12	.656	Moderate
5. I'm ready for highstakes English tests on a computer.	2.26	.739	Moderate

The self-perception regarding readiness in terms of language skills is shown in Table 3. It was apparent that students did not feel ready for high-stakes computer-based tests. They had the least confidence in speaking. Although listening seemed higher than other skills, the difference was not distinct. Thus, it might be reasonable to conclude that English language skills of students in regional areas are still short, as the means show.

TABLE 4 Comparisons of the Readiness in Computer Skills by Years of Study

	Df	SS	MS	F	P
Between groups	3	9.795	3.265	17.532*	.000
Within group	568	105.778	.186		

* p <.05.

A between subjects one-way ANOVA was conducted to compare the respondents' readiness in using computers based on class standings. There was a significant difference in the opinion at the p<.05 level for the four groups [F(3, 568) = 17.532, p=.000].

When the computer skills of college students in regional areas of Thailand were compared according to class standings by using One-way ANOVA, it was found that students in different years had significantly different levels of computer skills as shown in Table 4. The longer students studied in college, the more skills they had.

TABLE 5 Post hoc analysis of readiness in computer skills compared by class standing

Class Standing	M	Freshmen	Sophomore	Junior	Senior
Freshmen	2.75	-	.0579	.187*	.350*
Sophomore	2.80		-	.136	.298*
Junior	2.93			-	.163*
Senior	3.10				-

Table 5 shows the post hoc analysis of the computer skills by class standing. Senior students felt the most confident, and their computer skills were significantly higher than all other classes.

TABLE 6 Comparisons of the Readiness in English Skills by class standing

	Df	SS	MS	F	P
Between groups	3	.828	.276	.849	.468
Within group	567	184.459	.325		

* p <.05.

A between-subjects one-way ANOVA was conducted to compare the readiness in English language skills among class standings. There was no significant difference in the readiness for the four groups [F(3, 567) = .849, p=.468]. This indicates that the English proficiency of Thai college students in regional areas might remain the same even after spending four years studying at their university.

TABLE 7 Relationship between computer skills and English language skills

	Computer skill
English skill	.31**

** p <.01.

A Pearson product-moment correlation coefficient was computed to assess the relationship between the readiness in computer skills and English language skills. It was found, as shown in Table 7, that there was a positive correlation between the two variables, r = 0.31, n = 564, p = 0.000.

Discussion

The statistics related to computer skills uncovered the fact that technology has remarkably penetrated the Thai society, which corresponds to that of Chompoochart (2017). The digital divide seems to have been narrowed in the regions. Therefore, students should be able to use computers for testing without fear. However, when it comes to using a microphone to record their voice and typing in English, the lower mean scores of these two skills implied that students lacked experience in voice recording and English typing. Participants' readiness in terms of English language proficiency was found to be moderate. This result is parallel with a survey published in The Nation (2016), which found that 37 per cent of the students lacked confidence in their language skills. Whether it was reading, listening, speaking, or writing, university students in the countryside appeared to immediately require advanced English coaching. Their mean scores on this issue were only around midpoint. However, the tests usually feature difficult content knowledge and measure authentic fluency. One solution is to use textbooks and materials in university courses that match with the substance in the IELTS and the TOEFL iBT, for example; otherwise, students might never be ready by the time they graduate.

In the comparison of computer skills, it was clear that the longer they studied in college, the more skillful in computers they became, in line with Ramsin and Mayhall's finding (2019). This might be due to the result of having access to computers at the university. It could also possible that there are assignments, tasks, and experience familiarize them with computers. While computer skills differed among the class standings, there was no significant difference in English skills. This perhaps suggests that four-year education in a university did not profoundly increase their English use, which was a surprising finding. If freshmen and seniors do not feel ready for a computer-based international English test, the curricula that they study might lack sufficient courses, so students have not had necessary exposure to English. Thus, administrators and teachers in regional universities must reconsider or revise their curricula as well as the teaching and learning pedagogy. A better syllabus must ensure that undergraduates gain substantial English development as they are proceeding to graduation. The final point to be discussed is the correlation found between computer skills and English skills. This was consistent with the finding discovered by Jin and Yan (2017) who found that the higher the computer familiarity level, the higher the scores in the computer-based writing. Therefore, if a test taker in rural Thailand wants to score highly on a computer-based test, such as the TOEFL and the IELTS, they need to master both skills. If their English skills are brought to the same or higher level, it will certainly lead to test achievement.

Conclusion and Recommendation

In conclusion, this research sought to confirm whether Thai college students in regional areas possess sufficient computer skills and English language proficiency ready for English tests that are administered via computers. Despite the limitations in the nature of survey research soliciting opinion, the findings offer a good perspective. It can be concluded that students in the far-flung regions seemed to have developed computer skills and familiarity; however, they might lack English language proficiency which is central and critical in the success of a world-standard assessment. Thus, teachers and educators should consider supplying advanced-level English materials and courses. It will be advantageous if the universities have English testing software or

programs installed on computers and provide them to students. They can practice using headphone, mouse, and keyboard to take the test and increase a chance to get a better score. Many commercial textbooks provide companion web sites, so teachers should lead students to use the online resources. Finally, future investigations by requesting students to trial a computer-based English test could satisfactorily corroborate the results.

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