

GEPT anxiety test for vocational and technical university students in Taiwan

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ABSTRACT: Since 1999, the Ministry of Education has promoted the General English Proficiency Test (GEPT) as a graduation criterion of proficiency in the English language. With the GEPT qualification as a graduation criterion, technical and vocational university students, having no confidence and motivation to learn English, experience GEPT test anxiety. This study explores whether or not vocational and technical university students experience different levels of anxiety in taking the GEPT, and whether or not there are differences in GEPT test anxiety levels among students of different genders, and opportunities to talk to foreigners. Several conclusions were drawn from the findings of this study. First, vocational and technical university students experience certain levels of GEPT test anxiety. Second, females experience more emotional anxiety than males. Third, students who seldom have the opportunity to talk to foreigners experience more cognitive anxiety, emotional anxiety, and affective anxiety than students with more opportunities to talk to foreigners.

INTRODUCTION

Because most Taiwanese university students are not proficient in English, many academics strongly believe that university teachers should encourage their students to learn English during their four years at college. Chen stated that education in the English language should be compulsory for all four years of the college curriculum [1]. Chen also pointed out that the English proficiency-level test should be more fair and reliable, hence promoting a criterion-referenced English test [1]. The test content should cover not only general English but also professional English. By incorporating academic and professional material into college English learning, the entire college English learning process could become a more meaningful and lifelong learning experience [2]. Since 1999, the Ministry of Education has promoted the General English Proficiency Test (GEPT) as a measure of lifelong learning, expecting citizens to have four skills in the English language - listening, speaking, reading and writing.

Many people in Taiwan view the GEPT test as a way to prove their ability in English and increase their competitive advantage in the workforce. As a result, many GEPT test-takers are members of the general public, and not only students. Some people, who pass the GEPT test, find that the GEPT certificate is a guarantee of finding a good job, as many enterprises prefer hiring people with English language qualifications and a GEPT certificate [2]. To promote competition in the student workforce, the Taiwanese Government encourages students to pursue a total English learning environment and further obtain the GEPT qualification certificate. Hence, the Government expects universities to set up a standard procedure for passing the GEPT test to help students pass the test after their four-year college life. As a result, many universities have promoted and added a GEPT qualification as a criterion for English competency.

With a GEPT certificate in hand, students have access to more work opportunities and more opportunities for promotion. However, the graduation threshold for English proficiency also causes some pressure on university students, especially vocational and technical university students. Most Taiwanese university students worry about not passing the GEPT test because they are afraid that their English abilities are not good enough to meet the GEPT requirements.

LITERATURE REVIEW

To encourage Taiwanese people to learn English, in 1999 the Ministry of Education assigned the Language Training & Testing Centre (LTTC) to promoting the GEPT test, a criterion-referenced test, as a means of motivating students and citizens to learn English. The GEPT test is divided into five levels, from very easy to the most difficult to meet the purpose of an English education and life situation: Elementary, Intermediate, High-Intermediate, Advanced, and Superior. However, the Superior-Level test is not held regularly unless requested by institutions or schools [3]. The Elementary, Intermediate and High-Intermediate-Level (GEPT) tests are held twice a year, and the Advanced level is held once a year. Each level of a test's content includes four parts: listening, reading, writing and speaking, and is

divided into two stages. The first stage tests reading and listening skills. If the examinee passes the first stage, he/she is permitted to take the second-stage test, which includes the writing and speaking parts. To obtain a GEPT certificate, the examinee must pass both stages of the test.

Approximately 2.2 million people have taken the GEPT test [3]. The GEPT certificate is regarded by government departments, business organisations and institutes, as a dependable and objective English proficiency criterion to be used for staff hiring, promotions and even scholarship applications. In 2008, the *International Journal of Language Testing* gave a positive evaluation of the GEPT test, including test quality, reliability and validity and the influence of English learning in Taiwan, etc [4]. Hence, some universities have implemented a policy of adding GEPT qualification as a graduation criterion for English proficiency. However, the graduation threshold for English proficiency also causes some pressure on university students, especially vocational and technical university students. Compared to general university students, most of the students entering the vocational and technical universities are those with lower academic achievement, including English proficiency [5-7].

Moreover, in Taiwan the vocational and technical education is career orientated and aims to train professionals to meet the demands of national economic growth, industrial change and technological advancement [8]. Having focused more on professional knowledge and specialised skills, most vocational and technical university students tend to regard English courses as a low priority. This misunderstanding leads them to believe the English courses contribute little to their academic and career goals; they do not want to put much effort into English courses, simply desiring not to be failed in these courses [9].

Due to the difficulties experienced in the English learning process, vocational and technical university students have low confidence and poor motivation in learning English. Up to two-thirds of them have experienced pain and frustration in learning English [10-11]. Hence, with the GEPT qualification as a graduation criterion, technical and vocational university students worry that their English abilities are not good enough to meet the GEPT requirements.

The aim of this study was to explore whether or not vocational and technical university students experience GEPT test anxiety and whether or not there are differences in GEPT test anxiety levels among students of different genders, and opportunities to talk with foreigners. To achieve these goals, the following hypotheses were studied:

Hypothesis 1: vocational and technical university students experience a level of GEPT test anxiety.

Hypothesis 2: vocational and technical university students of different genders experience different levels of GEPT test anxiety.

Hypothesis 3: vocational and technical university students with different opportunities to talk to foreigners experience different levels of GEPT test anxiety.

METHODOLOGY

Sample, Instruments, Validity and Reliability

To explore whether or not vocational and technical university students experience a level of GEPT test anxiety, and whether or not there are differences in GEPT test anxiety levels among students of different genders, and opportunities to talk with foreigners, 320 questionnaires were distributed to vocational and technical university students to investigate their levels of GEPT test anxiety. Among these, 69.69% were female ($n=223$) and 30.31% were male ($n=97$). A GEPT Test Anxiety Scale (GEPT-TAS) was developed by the researchers to obtain a comprehensive understanding of students' GEPT test anxiety levels. To ensure the items on the questionnaire could be understood, the initial questionnaire was first read by 55 university students, and eight questions were deleted because they were unclear or ambiguous. Later, based on three English teachers' feedback, some modifications were made to make the questions clearer. The questionnaire was finalised into 36 questions, covering the cognitive, emotional and affective dimensions of test anxiety. To precisely measure students' GEPT anxiety levels, answers were scored using a five-point Likert's scale, ranging from 5 (strongly agree) to 1 (strongly disagree). The scores of the GEPT-TAS ranged from 36 to 180. Some items on the questionnaire were negative statements, hence scored in reverse. Later, a pilot study was conducted with the same 55 students to test the internal consistency and reliability of each category of the questionnaire, and this is shown in Table 1. So far, the questionnaire being examined for validity has passed; therefore, it can be formally used.

Table 1: Reliability coefficients for the categories on the GEPT-TAS.

Category	Cronbach's Alpha	Category	Cronbach's Alpha
Cognitive Anxiety	0.89	Affective Anxiety	0.90
Emotional Anxiety	0.90	Overall Anxiety	0.95

The Pearson Correlation Coefficient was also calculated in this study, between any two categories in the GEPT-TAS, and the results are presented in Table 2. The correlation coefficients in the pilot study are between 0.561 and 0.724. The p -value is less than 0.01, which indicates there is a significant correlation between any two categories in the GEPT-TAS questionnaire.

Table 2: Pearson correlation coefficient analysis of the pilot study on the GEPT-TAS questionnaire.

	Cognitive Anxiety	Emotional Anxiety	Affective Anxiety
Cognitive Anxiety	1	0.609	0.724
Emotional Anxiety	0.000**	1	0.561
Affective Anxiety	0.000**	0.000**	1

The value above the 1 is the correlation coefficient; the value below the 1 is the *p*-value; ***p* < 0.01

Data Analysis

The collected data were analysed quantitatively using Statistical Packages for the Social Sciences (SPSS). The descriptive statistics included means, percentages, and standard deviations. Moreover, the *t*-test, one-way ANOVA (analysis of variance), and post hoc multiple comparison Least Significant Difference (LSD) methods were used to explore the differences in GEPT test anxiety levels among vocational and technical university students of different genders, and opportunities to talk to foreigners.

RESULTS

The aim in conducting this study was to explore whether or not vocational and technical university students experience a level of GEPT test anxiety, and whether or not there are differences in GEPT test anxiety levels among students of different genders, and opportunities to talk with foreigners. To test Hypothesis 1, descriptive statistical analyses of the GEPT-TAS was used in the study, including means, percentages of students who agreed or disagreed with statements, subscale rank order and overall anxiety rank order.

Table 3 lists the means and standard deviations of cognitive anxiety subscale, emotional anxiety subscale, affective anxiety subscale and overall GEPT anxiety scale. The mean score of the 36 items is 3.96 with a standard deviation of 0.61. Students with an overall GEPT mean score higher than 3.96 experience more GEPT test anxiety than average. The mean score of items 1-12 (cognitive anxiety scale) is 3.99 with a standard deviation of 0.71. If a student’s mean score is higher than 3.99 in the cognitive anxiety scale, that student has more cognitive anxiety than average. The mean score of the items 13-24 (emotional anxiety) is 3.65 with a standard deviation of 0.71. If a student’s mean score is higher than 3.65 in the emotional anxiety scale, that student has more emotional anxiety than average. The mean score of the items 25-36 (affective anxiety) is 4.24 with a standard deviation of 0.69. If a student’s mean score is higher than 4.24, that student has more affective anxiety than average.

Table 3: Means and Standard Deviations of cognitive, emotional and affective subscales and GEPT test anxiety scale.

Factor	M	SD
Cognitive Anxiety	3.99	0.71
Emotional Anxiety	3.65	0.71
Affective Anxiety	4.24	0.69
Overall GEPT Anxiety	3.96	0.61

Participants: 320; M: mean; Sd: Standard Deviation

To test Hypothesis 2, the independent sample *t*-test was used to identify statistically significant differences in the means between male and female students in the cognitive, emotional and affective anxiety subscales. The statistical results in Table 4 reveal no significant differences in the cognitive anxiety scores (*t* = -0.916, *p* > 0.05) and the affective anxiety (*t* = -1.230, *p* > 0.05). However, there is a significant difference between males and females in emotional anxiety (*t* = -2.993, *p* < 0.05). Females have a higher emotional anxiety score (*M* = 44.79) than males (*M* = 41.71). In other words, females experience more emotional anxiety than males before and during the GEPT test.

Table 4: Independent *t*-test results of students of different genders.

Factors	Gender	M	SD	<i>t</i>	<i>p</i> -value
Cognitive Anxiety	Male	47.22	9.47	-0.916	0.360
	Female	48.16	8.01		
Emotional Anxiety	Male	41.71	9.00	-2.993	0.003*
	Female	44.79	8.21		
Affective Anxiety	Male	50.07	9.21	-1.230	0.219
	Female	51.31	7.78		

Male: 97; Female: 223; M: mean; Sd: Standard Deviation; **p* < 0.05

To test Hypothesis 3, the students were divided into three different categories based on their opportunities to talk to foreigners: seldom, sometimes and always. Results show that 196 students seldom have the opportunity to talk to foreigners, 115 students occasionally talk to foreigners, and 9 students always have the opportunity to talk to foreigners. Table 5 shows the results of one-way ANOVA, indicating there are notably significant differences in the cognitive,

emotional and affective test anxiety scores among students with different levels of opportunities to talk to foreigners ($p < 0.01$). Because ANOVA results reveal there are significant differences in cognitive, emotional and affective anxiety scores among students with different opportunities to talk to foreigners, post hoc multiple comparison LSD was applied to determine which pairs of means differ significantly.

In terms of cognitive anxiety, the LSD post hoc multiple comparison test reveals students, who seldom talk to foreigners ($M=50.07$; $Sd=7.92$) experience much more significant cognitive anxiety than those, who occasionally talk to foreigners ($M=44.75$; $Sd=8.26$; $p=0.000 < 0.01$). Also, students, who seldom talk to foreigners experience much more significant cognitive anxiety than those, who always have the opportunity to talk to foreigners ($M=40.00$; $Sd=5.89$; $p=0.000 < 0.01$). In other words, students, who seldom talk to foreigners experience more cognitive anxiety than other students.

In terms of emotional anxiety, the LSD post hoc multiple comparison test results show that students, who seldom talk to foreigners ($M=44.98$; $Sd=8.36$) experience much more significant emotional anxiety than those, who occasionally talk to foreigners ($M=42.38$; $Sd=8.66$; $p=0.009 < 0.01$) and those, who always have the opportunity to talk to foreigners ($M=38.22$; $Sd=7.16$; $p=0.019 < 0.05$). In other words, students, who seldom talk to foreigners experience more emotional anxiety than other students.

In terms of affective anxiety, the LSD post hoc multiple comparison test results show that students, who seldom talk to foreigners ($M=52.84$; $Sd=7.80$) experience much more significant affective anxiety than those, who occasionally talk to foreigners ($M=48.22$; $Sd=8.11$; $p=0.000 < 0.01$). These students also experience more significant affective anxiety than those, who always have the opportunity to talk to foreigners ($M=44.78$; $Sd=7.12$; $p=0.003 < 0.05$). That is to say, students, who seldom have the opportunity to talk to foreigners experience more affective anxiety than other students.

Table 5: ANOVA results of the students having different opportunities to talk to foreigners.

Factor	Source of Variance	Sum of Squares	Degree of Freedom	Mean Square	F	Significance
Cognitive Anxiety	Between Groups	2628.313	2	1314.157	20.521	0.000**
	Within Groups	20300.687	317	64.040		
	Total	22929.000	319			
Emotional Anxiety	Between Groups	782.748	2	391.374	5.492	0.005**
	Within Groups	22590.639	317	71.264		
	Total	23373.388	319			
Affective Anxiety	Between Groups	1890.900	2	945.450	15.156	0.000**
	Within Groups	19649.842	315	62.380		
	Total	21540.742	317			

Seldom: 196; Sometimes: 115; Always: 9

* $p < 0.05$; ** $p < 0.01$

DISCUSSION AND CONCLUSIONS

The results of this study show that vocational and technical university students in Taiwan experience a level of GEPT test anxiety, and students of different genders and opportunities to talk to foreigners experience different levels of GEPT test anxiety. Table 6 shows the three highest scores and the three lowest scores in the GEPT test anxiety scale based on overall rank. The three most serious GEPT test anxieties students reacted to are as follows. Item 26 (affective anxiety): *While taking the GEPT test, I am anxious about the English speaking section*; Item 7 (negative statement; cognitive anxiety): *I never worry about the GEPT test*; Item 4 (cognitive anxiety): *I always feel that my English language abilities are not good*.

Due to the lack of an English-speaking learning environment, many students regard the speaking section as the most difficult part of the GEPT. Therefore, they worry about their ability to pass the GEPT test, having less confidence while taking the test. The three least serious GEPT test anxieties students reacted to include the following. Item 14 (emotional anxiety): *I have trouble sleeping the night before the GEPT*; Item 13 (emotional anxiety): *I feel nauseated before the GEPT test*; Item 19 (emotional anxiety): *I have butterflies in my stomach before or during the GEPT test*. Note that all the least three serious GEPT test anxieties belong to emotional anxiety. Students reveal that before or during the test, they have fewer of the above-mentioned symptoms. Hence, the GEPT test does not cause too many serious physical problems for students. In other words, emotional anxiety is not the main factor leading to test anxiety.

Research results also show there are no significant differences in the cognitive anxiety and affective anxiety between male and female students. However, there is a significant difference between males and females in terms of emotional anxiety. That is to say, female students experience more emotional anxiety than male students. Based on Leary and Buckley's research, females are inclined to pay more attention to subtle situations, hence easily putting too much pressure upon themselves [12]. Also, when predicting future events, females tend to fall into negative thinking. With this negative thinking mindset, compared to males, females experience more worries and anxieties when perceiving uncertainty [13].

Table 6: The three highest scores and the three lowest scores in the GEPT test anxiety scale.

Rank	The Three Highest Scores in the scale	M	The Three Lowest Scores in the scale	M
1	Item 26: <i>While taking the GEPT test, I am anxious about the English speaking section.</i> (Affective anxiety)	4.53	Item 14: <i>I have trouble sleeping the night before the GEPT.</i> (Emotional anxiety)	3.06
2	Item 7: <i>I never worry about the GEPT test.</i> (Cognitive anxiety)	4.45	Item 13: <i>I feel nauseated before the GEPT test.</i> (Emotional anxiety)	3.26
3	Item 4: <i>I always feel that my English language abilities are not good.</i> (Cognitive anxiety)	4.41	Item 19: <i>I have butterflies in my stomach before or during the GEPT test.</i> (Emotional anxiety)	3.28

M: mean

The research results also show there are significant differences in cognitive, emotional and affective anxiety among students with different opportunities to talk to foreigners. In terms of cognitive, emotional and affective anxiety, LSD post hoc multiple comparison test results reveal that Seldom>Sometimes; Seldom>Always. Students, who seldom have the opportunity to talk to foreigners, may be afraid of oral communication with foreigners. Hence, their speaking competency is not as good as others. On the other hand, students, who talk to foreigners, tend to be accustomed to the English learning environment and thus have more confidence in facing English speaking tests. Therefore, their test anxieties are lower than others.

Moreover, because the Taiwanese education system has never focused on developing students' proficiency in speaking English, students do not have much opportunity to speak English. However, at this time, the Government has set up and actioned the GEPT test certificate, emphasising that students should develop equally the four English skills: not only reading and writing, but also listening and speaking [3]. Research shows that even though students can achieve a high score in English tests, they still fail to speak English fluently [14]. Therefore, promoting all four English skills - listening, speaking, reading and writing - would, in turn, increase students' GEPT test anxiety. Further, because English is not the official language of Taiwan, students, who want to be proficient in speaking English, must exert more effort than other students in bilingual countries, who can speak their mother tongue as well as English, such as Singapore, Philippines and India [15]. Likewise, students who have the opportunity to talk to foreigners in some way can accumulate English speaking experience, much like students in bilingual countries. Hence, when students have more confidence and opportunities to speak English, they experience less anxiety than other students.

Based on the above results, several conclusions can be drawn from the findings of this study. First, vocational and technical university students experience a level of GEPT test anxiety. Second, females experience more emotional anxiety than males. Third, students, who seldom have the opportunity to talk to foreigners, experience more cognitive anxiety, emotional anxiety and affective anxiety than students with more opportunities to talk to foreigners.

There are some limitations in this study. First, not all participants had taken the GEPT test, so they may not have given an accurate answer when filling out the survey questionnaire. Second, the participants are vocational and technical university students of Taiwan. Therefore, the results and interpretations of this study may only apply to similar situations in Taiwanese schools. If researchers would like to use the results and findings of the study, they should carefully examine the background of the study and the similarity of the participants.

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Appendix A. The questionnaire items in the GEPT-TAS scale

I. Cognitive Anxiety Subscale

1. I am worried that I won't ever pass the GEPT test.
2. I don't believe that I can pass the GEPT test.
3. I think my parents and teachers will be disappointed with my GEPT test results.
4. I always feel that my English language abilities are not good.
5. I feel pressure to pass the GEPT test before graduation.
6. My mind goes blank during the GEPT test.
7. I never worry about the GEPT test. (-)
8. While taking the GEPT test, I make mistakes on easy questions or put answers in the wrong places.
9. I believe that I can do well in the GEPT test. (-)
10. While taking the GEPT test, I have difficulty choosing answers.
11. Once I get out of the testing situation, I remember the information that I had blanked out on during the test.
12. While taking the GEPT test, I find myself thinking of the consequences of failing.

II. Emotional Anxiety Subscale

13. I feel nauseated before the GEPT test.
14. I have trouble sleeping the night before the GEPT.
15. The closer I come to the GEPT test date, the harder it is for me to concentrate on the material.
16. I feel uneasy and upset before the GEPT test.
17. I feel my heart beating while taking the GEPT test.
18. I have sweaty palms, shaky hands, or other signs of nervousness right before the GEPT test.
19. I have butterflies in my stomach before or during the GEPT test.
20. I feel confident and relaxed for taking the GEPT test. (-)
21. Even though I'm prepared for the GEPT test, I still feel anxious about it.
22. While taking the GEPT test, I am so nervous that I forget material that I know.
23. Before taking the GEPT test, I cannot eat anything.
24. While taking the GEPT test, my emotional feelings do not interfere with my performance. (-)

III. Affective Anxiety Subscale

25. While taking the GEPT test, I am anxious about the English listening section.
26. While taking the GEPT test, I am anxious about the English speaking section.
27. While taking the GEPT test, I am anxious about the English writing section.
28. While taking the GEPT test, I am anxious about the English reading section.
29. While taking the GEPT test, I find I can't understand the context of the questions.
30. While taking the GEPT test, I find I can't answer the questions in a timely manner.
31. While taking the GEPT test, I fail to write the composition within the time allotted.
32. While taking the GEPT reading test, I find I can't understand every word.
33. It is easy to understand the listening section of the GEPT test. (-)
34. It is easy to write a composition for the GEPT writing test. (-)
35. It is easy to understand the reading section of the GEPT test. (-)
36. It is easy to answer the speaking section of the GEPT test. (-)