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A correspondence analysis of English proficiency and demographic factors among EFL students at Burapha University, Thailand

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ABSTRACT

The study aimed to determine the correspondence association between English proficiency and demographic factors of EFL students. The sample consisted of 385 non-English major students at Burapha University, Thailand. The English test scores and demographic factors were analyzed using descriptive statistical methods, the Chi-square test, and correspondence analysis. The results showed that English proficiency was not associated with gender. However, the English proficiency level corresponded with the age groups and faculties. Moreover, students from high-income families tended to have higher proficiency, while those from moderate-income families tended to have moderate proficiency. Parents' education and occupations also correspond with the English proficiency level.

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1. Introduction

English proficiency is a crucial skill for students in higher education, yet many non-English majors still struggle to develop these skills. A nationwide study on English receptive skills revealed that Thai undergraduates scored an average of 342.55 out of 990 on the TOEIC test, with significant differences observed across gender and major (Jehma et al., 2021). Despite Thailand's ongoing English education, many non-English major students face challenges such as limited real-world practice, rote-based instruction, and inadequate exposure—especially in rural or under-resourced settings (Huttayavilaiphan, 2025). Similar to many other universities, Burapha University's students face challenges in achieving English skills. However, there is limited evidence in this specific context, as most studies were focused on foreign students, high school students, or other institutions. As Burapha University students come from various backgrounds, demographic are factors are considered to affect their English proficiency. So, this study aims to investigate the factors that may influence the English language proficiency of students who are not majoring in English at Burapha University (BUU). As English has become an international language, encouraging language skills has become the primary goal in schools' and universities' efforts to teach and create a proper learning environment for their students. Over the years, English has become one of the critical languages that one should acquire as a survival skill. Government and private organizations commonly use the English score as a criterion for recruiting employees (Arisa JK, 2018). Higher English proficiency could promise career opportunities, high—level job security, and income (Prasobnet, 2018). Therefore, proficiency among university students, particularly those not majoring in English, should be a concern as they enter the workforce. English could guarantee their success in getting hired and receiving a reasonable salary.

The question is what factors could influence their English proficiency and shed light on how to effectively handle EFL students.

Demographic factors, including gender, age, year of study, and faculty, were examined. They can play a crucial role in students' educational outcomes by trying to understand how they influence academic performance for valuable insights. Gender is considered a significant factor that researchers focus on in many aspects of the academic field. In language acquisition, it has been found that men and women use language differently, with women generally being more proficient in language than men (Alotaibi, 2024), yet there were no appreciable differences in the autonomous English learning factors between students in the Art-English program and those in the Science-Mathematics program; students in the Art-English program were found to have higher autonomous English learning than students in the Science-Mathematics program (Preepool, 2017). However, the choice of faculty in a university can create distinct learning environments and expectations that influence the students' English performance and scores (Azkiyah, 2018).

Moreover, demographic factors about family status, including parents' education, occupation, and family income, are also significant circumstances in language acquisition. Yahaya et al. (2011) suggested that parents provide two-language learning resources to make a bilingual child, which could be attributed to parental socioeconomic status. The languages in a family are associated with a child's language proficiency and comprehension (Volodina et al., 2021). It was also suggested that the language outcome was influenced by the level of a parent's engagement with the children (Varghese & Wachen, 2015). However, the social cognitive theory argues that the importance of other parties in society also influences second language acquisition and language proficiency. Therefore, family status is highlighted as a significant factor influencing English proficiency in EFL Students.

Understanding the key factors that affect language acquisition can lead to the adaptation of practical educational approaches and classroom interactions. There have been many studies that have realized the importance of Teacher cognition, which refers to the direct effect of the teacher's attitude on teaching in the classroom (Zheng et al., 2022; Chen & Abdullah, 2022) as there were problems with the idea of a "one-size-fits-all" classroom, or the teaching that fits everyone without considering the diverse needs of learners (Chen & Abdullah, 2022). This concept is closely related to the Sociocultural Theory of Vygotsky (1978), which stated that learning is a social process, and a child's home environment provides the main "cultural toolkit" for their language development. Moreover, learning was not only an intrapersonal intellectual process but a process that occurs through social interaction via mediation (Hughes, 2021). Therefore, environmental factors also play a significant role in the acquisition of knowledge.

In terms of the English proficiency test, BUU-CET U is an exit exam administered by Burapha University, as it is considered a standard test of the university that measures students' English language skills upon entry and before graduation. BUU-CET U consists of two parts: the listening and the reading parts, allowing students to demonstrate their language comprehension at the collegiate level. The test score of BUU-CET U can also be equivalent to other standard tests, including the CEFR (Common European Framework of Reference for Languages) and the TOEIC (Test of English for International Communication). The score comparison table is shown in Table 1 (BUULI, 2025).

Table 1. Score comparison of BUU-CET U, CEFR Level, and TOEIC

BUU-CET U Score	BUU-CET U Level	CEFR Level	TOEIC Score
1-20	Level 1	A1	120
21-40	Level 2	A2-A2+	170
41-50	Level 3	A2+-B1	225
51-60	Level 4	B1-B1+	550

Unlike other studies in the area, this research employs correspondence analysis to visually represent the multivariate relationships between language proficiency and demographic factors in a graphical format. This method provides a geometric representation of the rows and columns of a two-way frequency table, aiding in the interpretation of similarities among category levels and the associations between variables (Greenacre, 2017). Moreover, it focuses specifically on non-English major students at Burapha University, reflecting the big picture of the EFL students in Thailand

(Huttayavilaiphan, 2025). The findings of this study are expected to provide practical implications for the development and improvement of English teaching practices in similar educational contexts, thereby filling a research gap in the Thai university setting. These can fill in the research gap and develop the education.

2. Method

The respondents of this research were 385 non-English major undergraduate students at Burapha University. Taro Yamane's formula was used to calculate the sample size with a margin of error of 0.05, based on an estimated population of 10,000 students who had taken the BUU-CET U test in the past three years. The respondents were selected using a simple random sampling method.

The instrument used in this study was a questionnaire to collect data, including English proficiency scores, students' BUU-CET U results, which they received upon completing the exam, and demographic background information: gender, age, year of study, faculty, family income, father's education, mother's education, father's occupation, and mother's occupation. The students majoring in English were excluded from the sample to ensure the focus on non-English majors. The validity of the instrument was validated by three experts, with a coefficient of more than 0.5. The reliability was confirmed through a pilot test with 30 non-English major students, with a coefficient of 0.88, which is considered acceptable.

The study received ethical approval (HU085/2565(E2)) from the Human Research Ethics Committee of Burapha University. Data collection was conducted after students completed the CUU-CET U exam, and they were invited to complete the questionnaire. The students were informed about the purpose of the research and asked to provide consent voluntarily.

The data was analyzed using descriptive statistics, including frequency and percentage, to summarize the demographic data and English proficiency scores. Correspondence analysis, including the Chi-square test, was used to assess the associations between variables and to visually represent the relationships between variables, as it displays multidimensional associations in a biplot, facilitating the interpretation of the correspondence between factors and proficiency.

3. Finding

3.1. Demographic information of the respondents

The data collected in this research were from a questionnaire completed by 385 students. The respondents were divided by gender, age group, year of study, and faculty (Table 2).

Based on Table 2, the respondents comprised 122 male students (31.7%) and 263 female students (68.3%). There were 72 students (18.7%) lower than 20 years of age, 272 students (70.6%) 20-22 years of age, and 41 students (10.6%) older than 22 years of age. The respondents in the 1st year were 74 students (19.2%), in the 2nd year were 58 students (15.1%), in the 3rd year were 82 students (21.3%), in the 4th year were 157 students (40.8 %), and in the 5th and 6th year were 14 students (3.6%). Those respondents are from various faculties, including 18 students from Fine and Applied Arts (4.7%), 39 students from Business Administration (10.1%), 4 students from Tourism Management (1%), 59 students from Political Science (15.3%), 49 students from Education (12.7%), 38 students from Humanity and Social Science (9.9%), 5 students from Music and Performing Arts (1.3%), 4 students from Geography and Geoinformatics (1%), 17 students from Science (4.4%) 31 students from Logistics (8.1%), 18 students from Engineering (4.7%), 16 students from Informatics (4.2%), 36 students from Sports Science (9.4%), 38 students from Allied Health Science (9.9%), 8 students from Pharmaceutical Sciences (2.1%), and 5 students from Nursing (1.3%).

Table 2. Personal information of the respondents (n = 385)

Characteristics	Category	Frequency	Percentage
Gender	Male	122	31.7
	Female	263	68.3
Age Groups	Lower than 20 years	72	18.7
	20 - 22 years	272	70.6
	Higher than 22 years	41	10.6
Year of Study	1st year	74	19.2
	2nd year	58	15.1
	3rd year	82	21.3
	4th year	157	40.8
	5th and 6th year	14	3.6
Faculty	Fine and Applied Arts	18	4.7
	Business Administration	39	10.1
	Tourism Management	4	1
Art Group	Political Science	59	15.3
	Education	49	12.7
	Humanity and Social Science	38	9.9
	Music and Performing Arts	5	1.3
	Geography and Geoinformatics	4	1
	Science	17	4.4
Science Group	Logistics	31	8.1
	Engineering	18	4.7
	Informatics	16	4.2
	Sports Science	36	9.4
Health Science Group	Allied Health Sciences	38	9.9
	Pharmaceutical Sciences	8	2.1
	Nursing	5	1.3

Based on Table 3, most respondents (222 students) received the BUU-CET U Level 2, accounting for 57.7%. The other BUU-CET U levels received were level 3 (96 students), accounting for 24.9%; level 1 (38 students), accounting for 9.9 %; and level 4 (29 students), accounting for 7.5%, respectively.

Table 3. BUU-CET U level of the respondents (n = 385)

BUU-CET U level	Frequency	Percentage
Level 1	38	9.9
Level 2	222	57.7
Level 3	96	24.9
Level 4	29	7.5

Based on Table 4, the family income among the students was mainly 30,000 Baht or lower, accounting for 44.9% (173 students). There were 133 families of students who received 30,001-60,000 Baht (34.5%), 56 families of students received 60,001-100,000 Baht (14.5%), and 23 families of students received More than 100,000 Baht (6%).

According to the father's education, 242 students (62.9%) whose fathers' educational degrees were lower than a bachelor's, 123 students (31.9%) whose fathers received bachelor's degrees, 17 students (4.4%) whose fathers had a master's degree, and 3 students (0.8%) whose fathers had a Ph.D.

According to the mother's education, there were 254 students (66%) whose mothers' educational degrees were lower than a bachelor's degree, 115 students (29.9%) whose mothers received bachelor's degrees, 15 students (3.9%) whose mothers had a master's degree, and one student (0.3%) whose mother had Ph.D.

Based on the father's occupation, 59 students (15.3%) had fathers who were business owners, 69 students (17.9%) had fathers who were government officers, 80 students (20.8%) had fathers who were company employees, 124 students (32.2%) had fathers who were freelancers, 11 students (2.9%) had fathers who were househusbands, and 42 students (10.9%) were fatherless.

Based on the mother's occupation, 53 students (13.8%) had mothers who were business owners, 44 students (11.4%) had mothers who were government officers, 77 students (20%) had mothers who were company employees, 132 students (34.3%) had mothers who were freelancers, 68 students (17.7%) had mothers who were housewives, and 11 students (2.9%) were motherless.

Table 4. Family status of the respondents (n = 385)

Characteristics	Category	Frequency	Percentage
Family Income	30,000 Baht and lower (low)	173	44.9
	30,001-60,000 Baht (moderate)	133	34.5
	60,001-100,000 Baht (high)	56	14.5
	More than 100,000 Baht (very high)	23	6.0
Father's Education	Lower than Bachelor	242	62.9
	Bachelor's degree	123	31.9
	Master's degree	17	4.4
	Ph.D.	3	0.8
Mother's Education	Lower than Bachelor	254	66.0
	Bachelor's degree	115	29.9
	Master's degree	15	3.9
	Ph.D.	1	0.3
Father's Occupation	Business owner	59	15.3
	Government/State officer	69	17.9
	Company employees	80	20.8
	Freelance	124	32.2
	Househusband	11	2.9
	Fatherless	42	10.9
Mother's occupation	Business owner	53	13.8
	Government/State officer	44	11.4
	Company employees	77	20.0
	Freelance	132	34.3
	Housewife	68	17.7
	Motherless	11	2.9

3.2. Correspondence association between demographic factors and the BUU-CET U level

The study inspected the relationship between BUU-CET U level and demographic factors, including gender, age, year of study, faculty, family income, father's education, mother's education, father's occupation, and mother's occupation. The data were statistically analyzed by correspondence analysis, and the results were as follows.

1) Correspondence association between the gender group and the BUU-CET U level

The correspondence analysis results between the gender group, and the BUU-CET U level of the respondents showed no association, as indicated by the Chi-square test of correspondence analysis (Chi-square = 2.41, Prob = 0.492). This showed that the BUU-CET U score was not associated with the students' genders. The contingency table and Chi-square test for the correspondence analysis of

the gender group and the BUU-CET U level are presented in Tables 5 and 6, respectively. It is noted here that the perceptual biplot map cannot be plotted if any dimension (in this case, gender) has only two groups.

Table 5. Contingency table of the gender group and the BUU-CET U level

Gender group	Frequency of BUU-CET U level				
	Level 1	*Level 2*	*Level 3*	*Level 4*	*Total*
Male	16	68	28	10	122
Female	22	154	68	19	263
Total	38	222	96	29	385

Table 6. Correspondence analysis of the gender group and the BUU-CET U level

Dimension	Singular Value	Inertia	Chi-Square	Prob. (df=3)	Percent of Inertia	
					Account for	*Cumulative*
1	0.079	0.006	2.41		100	100
Total		0.006	2.41	0.492	100	

2) Correspondence association between the age group and the BUU-CET U level

According to the correspondence analysis between age group and BUU-CET U level, illustrated in Tables 7 and 8, the Chi-square value equaled 10.75 ($p = 0.096$). It is implied that the null hypothesis was accepted with a statistical significance of 0.05. There was no correspondence between the age group and the BUU-CET U level. It was also found that dimensions 1 and 2 could explain the trend, accounting for 100% of the inertia (Table 8). Once the data were plotted into a biplot graph, the trend position of the association between the two variables, as shown in Fig. 1, indicated that the BUU-CET U level 4 tended to associate with the age group of more than 22 years. While the age group of 20-22 years tended to closely associate with the BUU-CET U level 3, and the age group lower than 20 years tended to closely associate with the BUU-CET U level 1 (Fig. 1).

Table 7. Contingency table of the age group and the BUU-CET U level

Age group	Frequency of BUU-CET U level				
	Level 1	*Level 2*	*Level 3*	*Level 4*	*Total*
Lower than 20	10	43	16	3	72
20 - 22 years	27	154	72	19	272
Higher than 22	1	25	8	7	41
Total	38	222	96	29	385

Table 8. Correspondence analysis of the age group and the BUU-CET U level

Dimension	Singular Value	Inertia	Chi-Square	Prob. (df=6)	Percent of Inertia	
					Account for	*Cumulative*
1	0.159	0.025	9.74		90.6	90.6
2	0.051	0.003	1.01		9.4	100
Total		0.028	10.75	0.096	100	

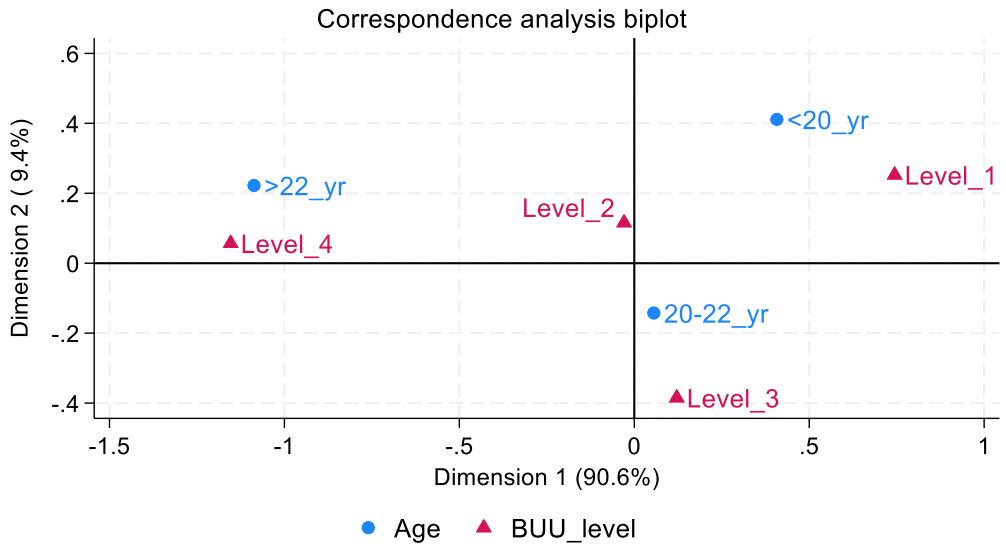

Fig. 1. Correspondence analysis biplot showing the association position of the age group and the BUU-CET U level

3) Correspondence association between the year of study and the BUU-CET U level

An analysis of the correspondence between the year of study and the BUU-CET U level of Burapha University students, as displayed in Tables 9 and 10, found that the Chi-square value equaled 37.19 (Prob. = 0.0002). The results implied that the null hypothesis was rejected at a significance level of 0.01, indicating a significant association between BUU-CET U level and the year of study. It was found that dimensions 1 and 2 could explain 90.02% of the inertia (Table 10). The biplot graph was plotted with dimensions 1 and 2 of the association position of the two variables. Fig. 2 stated that level 4 corresponded most with 5th-year and 6th-year students, with a strong association. Level 3 had the most correspondence with 2nd-year students. Level 2 had the most correspondence with students in years 1, 3, and 4, exhibiting a weak association, as their positions were close to the origin (Fig. 2).

Table 9. Contingency table of the year of study and the BUU-CET U level

Year of Study	Frequency of BUU-CET U level				*Total*
	Level 1	*Level 2*	*Level 3*	*Level 4*	
1st year	12	46	11	5	74
2nd year	7	23	25	3	58
3rd year	10	54	15	3	82
4th year	9	94	40	14	157
5&6th year	0	5	5	4	14
Total	38	222	96	29	385

Table 10. Correspondence analysis of the year of study and the BUU-CET U level

Dimension	Singular Value	Inertia	Chi-Square	Prob. (df=12)	Percent of Inertia	
					Account for	*Cumulative*
1	0.240	0.057	22.11		59.44	59.44
2	0.172	0.030	11.37		30.58	90.02
3	0.098	0.010	3.71		9.98	100
Total		0.097	37.19	0.0002	100	

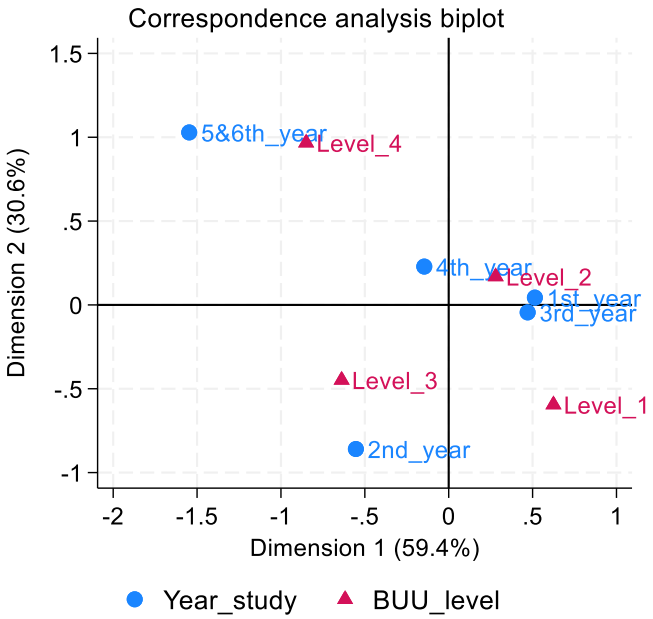

Fig. 2. Correspondence analysis biplot showing the association position of the year of study and the BUU-CET U level

4) Correspondence association between the faculty group and the BUU-CET U level

The study divided faculties into three groups: Art, Science, and Health Science. Art faculties included Fine and Applied Arts, Business Administration, Tourism Management, Political Science, Education, Humanities and Social Science, and Music and Performing Arts. Science faculties included Geography and Geoinformatics, Science, Logistics, Engineering, Informatics, and Sports Science. Health science faculties included Allied Health Sciences, Pharmaceutical Sciences, and Nursing. Therefore, in the correspondence analysis between the faculty group and the BUU-CET U level, as shown in Tables 11 and 12, it was found that the Chi-square value equaled 27.11 (Prob. = 0.0001), which rejected the null hypothesis at a significant level of 0.01. There was an association between the BUU-CET U level and the faculty groups. According to the correspondence analysis, dimensions 1 and 2 could explain the relationship with 100% of the inertia (Table 12). When the biplot graph was plotted to show the association position of the two variables, as shown in Fig. 3, it was found that the Health Science faculty group had the most correspondence with the BUU-CET U level 4, with a significant association, since their positions were far from the origin. The Science faculty group had the most correspondence association with the BUU-CET U level 2. The Art faculty group tended to associate more with BUU-CET U level 1 since they both had an acute angle from the origin (Fig. 3).

Table 11. Contingency table of the faculty group and the BUU-CET U level

Faculty group	Frequency of BUU-CET U level				*Total*
	Level 1	*Level 2*	*Level 3*	*Level 4*	
Art	24	119	56	13	212
Science	14	81	21	6	122
Health Science	0	22	19	10	51
Total	38	222	96	29	385

Table 12. Correspondence analysis of the faculty group and the BUU-CET U level

Dimension	Singular Value	Inertia	Chi-Square	Prob. (df=6)	Percent of Inertia	
					Account for	*Cumulative*
1	0.254	0.064	24.80		91.47	91.47
2	0.078	0.006	2.31		8.53	100
Total		0.070	27.11	0.0001	100	

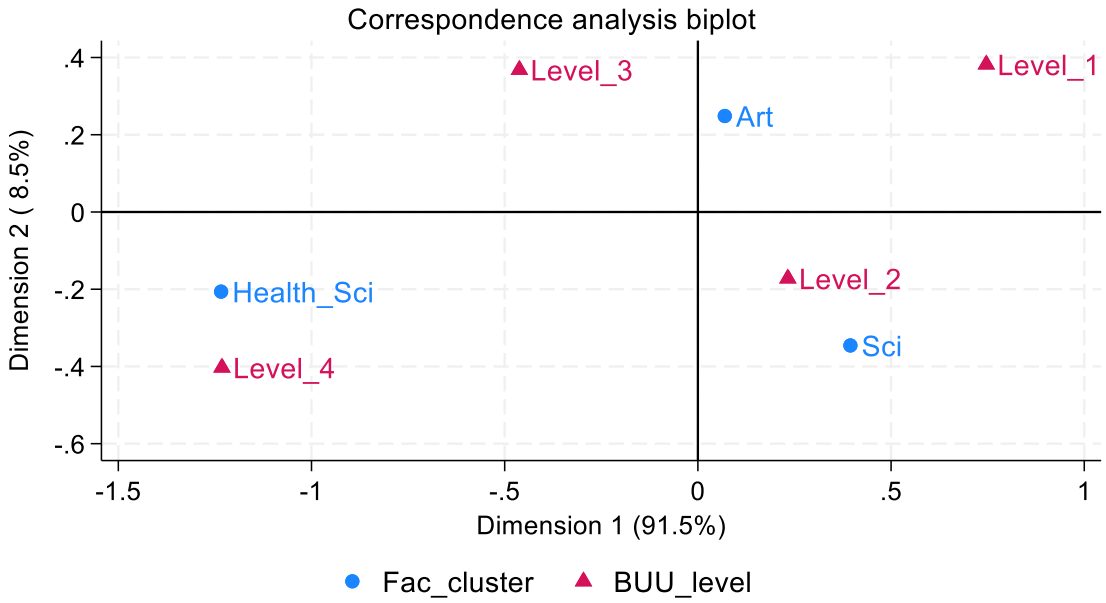

Fig. 3. Correspondence analysis biplot showing the association position of the faculty group and the BUU-CET U level

5) Correspondence association between the family income level and the BUU-CET U level

According to Tables 13 and 14, the results of the correspondence analysis between the family income level and the BUU-CET U level of Burapha University students showed that the Chi-square value equaled 12.30 (Prob. = 0.197), indicating that the null hypothesis was accepted. It was implied that there was no significant association between the student's family income and BUU-CET U level, with dimensions 1 and 2 accounting for 98.51% of the inertia (Table 14). However, according to the biplot perceptual graph (Fig. 4), students from high-income families tended to have high BUU-CET U scores at level 4, and students from moderate-income families tended to have moderate BUU-CET U scores at level 2.

Table 13. Contingency table of the family income level and the BUU-CET U level

Family income level	Frequency of BUU-CET U level				*Total*
	Level 1	*Level 2*	*Level 3*	*Level 4*	
Low	21	104	39	9	173
Moderate	13	80	30	10	133
High	2	28	19	7	56
Very High	2	10	8	3	23
Total	38	222	96	29	385

Table 14. Correspondence analysis of the family income level and the BUU-CET U level

Dimension	Singular Value	Inertia	Chi-Square	Prob. (df=9)	Percent of Inertia	
					Account for	*Cumulative*
1	0.172	0.029	11.32		92.06	92.06
2	0.045	0.002	0.79		6.45	98.51
3	0.022	0.001	0.18		1.49	100
Total		0.032	12.30	0.197	100	

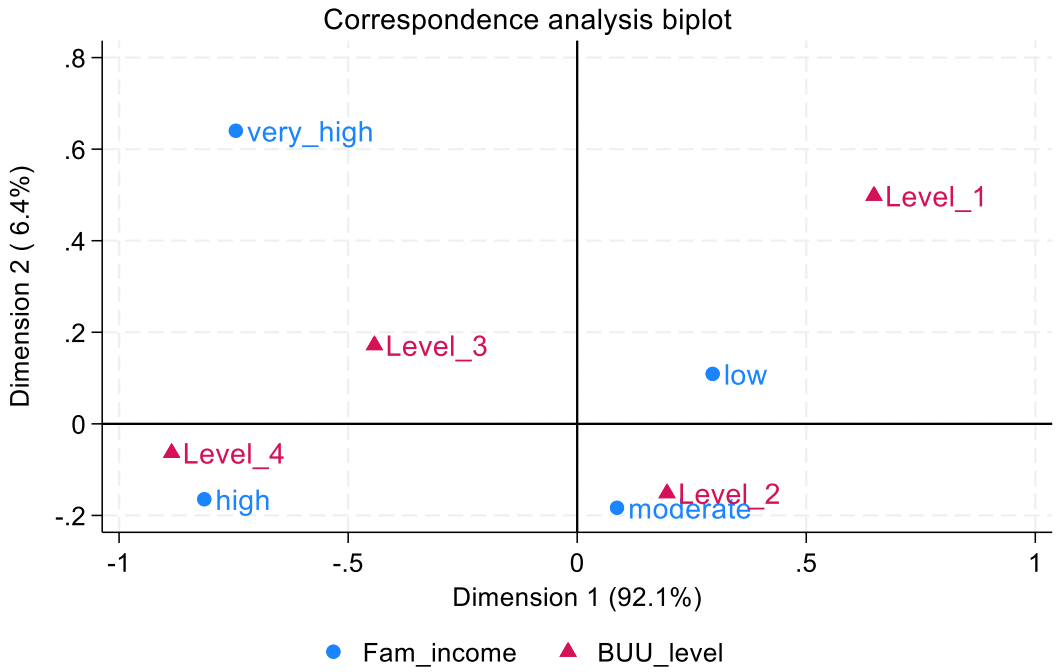

Fig. 4. Correspondence analysis biplot showing the association position of the family income level and the BUU-CET U level

3.2.6 ***Correspondence association between the father's education level and the BUU-CET U level***

According to the results of the correspondence analysis between the father's education level and the BUU-CET U level of students at Burapha University in Tables 15 and 16, it was found that the Chi-square value equaled 29.04 (Prob. = 0.001), which meant that it accepted the alternative hypothesis with a significance level of 0.01. It was implied that there was an association between the father's education and the BUU-CET U level, with dimensions 1 and 2 accounting for 99.95% of the inertia (Table 16). When the biplot graph was plotted to show the association position of the two variables, as shown in Fig. 5, it was found that students whose fathers had a master's degree had the most correspondence with the BUU-CET U level 4. Those with a bachelor's degree had the most correspondence with the BUU-CET U level 3. Those with education below a bachelor's degree were most closely aligned with the BUU-CET U level 2 and level 1 (Fig. 5).

Table 15. Contingency table of the father's education level and the BUU-CET U level

Father's education level	Frequency of BUU-CET U level				*Total*
	Level 1	*Level 2*	*Level 3*	*Level 4*	
Lower than Bachelor	27	146	57	12	242
Bachelor's degree	11	65	37	10	123
Master's degree	0	9	2	6	17
Ph.D.	0	2	0	1	3
Total	38	222	96	29	385

Table 16. Correspondence analysis of the father's education level and the BUU-CET U level

Dimension	Singular Value	Inertia	Chi-Square	Prob. (df=9)	Percent of Inertia	
					Account for	*Cumulative*
1	0.260	0.067	25.93		89.29	89.29
2	0.090	0.008	3.06		10.66	99.95
3	0.006	0.000	0.01		0.05	100
Total		0.075	29.04	0.001	100	

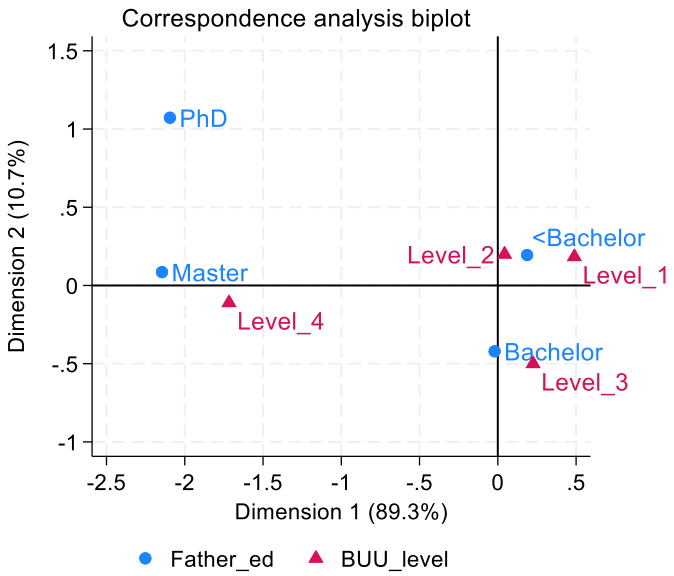

Fig. 5. Correspondence analysis biplot showing the association position of the father's education level and the BUU-CET U level

6) Correspondence association between the mother's education and the BUU-CET U level

According to the results of the correspondence analysis between the mother's education and the BUU-CET U level of students of Burapha University, as displayed in Tables 17 and 18, it was found that the Chi-Square value equaled 18.12 (Prob. = 0.034), which meant that it accepted the alternative hypothesis with the significance level of 0.05. It was implied that there was an association between the mother's education level and BUU-CET U level, with dimensions 1 and 2 accounting for 91.7% of the inertia (Table 18). When the biplot graph was plotted to show the association between the two variables, as shown in Fig. 6, it was found that students whose mothers held doctoral degrees did not correspond with any BUU-CET U level. However, those with a bachelor's degree had the most correspondence with the BUU-CET U level 1 and level 3, and those with a lower degree than a bachelor's degree had the most correspondence with the BUU-CET U level 2. It was also found that students whose mothers got master's degrees tended to associate with BUU-CET U level 2 (Fig. 6).

Table 17. Contingency table of the mother's education level and the BUU-CET U level

Mother's education level	Frequency of BUU-CET U level				*Total*
	Level 1	*Level 2*	*Level 3*	*Level 4*	
Lower than Bachelor	28	149	60	17	254
Bachelor's degree	10	62	34	9	115
Master's degree	0	11	2	2	15
Ph.D.	0	0	0	1	1
Total	38	222	96	29	385

Table 18. Correspondence analysis of the mother's education level and the BUU-CET U level

Dimension	Singular Value	Inertia	Chi-Square	Prob. (df=9)	Percent of Inertia	
					Account for	*Cumulative*
1	0.187	0.035	13.48		74.43	74.43
2	0.090	0.008	3.14		17.30	91.73
3	0.062	0.004	1.50		8.27	100
Total		0.047	18.118	0.034	100	

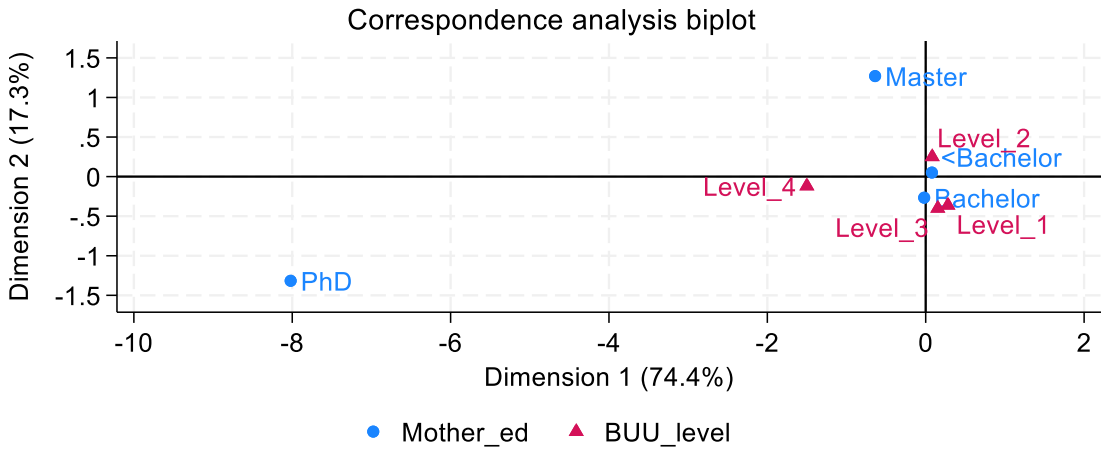

Fig. 6. Correspondence analysis biplot showing the association position of the mother's education level and the BUU-CET U level

7) Correspondence association between the father's occupation and the BUU-CET U level

According to the correspondence analysis between the father's occupation and the BUU-CET U level of students at Burapha University, as shown in Tables 19 and 20, the Chi-square value was 21.33 (Prob. = 0.127), indicating that the null hypothesis was accepted. It was implied that there was no association between the father's occupation and BUU-CET U level, with dimensions 1 and 2 accounting for 97.26% of the inertia (Table 20). However, according to the perceptual biplot in Fig. 7, it was revealed that students whose fathers were freelancers tended to associate closely with BUU-CET U level 2, while those whose fathers were company employees tended to associate with level 3.

Table 19. Contingency table of the father's occupation and the BUU-CET U level

Father's occupation	Frequency of BUU-CET U level				*Total*
	Level 1	*Level 2*	*Level 3*	*Level 4*	
Business owner	7	27	20	5	59
Gov./State officer	6	42	10	11	69
Company Employee	8	42	26	4	80
Freelancer	13	77	26	8	124
Steward	1	8	2	0	11
Fatherless	3	26	12	1	42
Total	38	222	96	29	385

Table 20. Correspondence analysis of the father's occupation and the BUU-CET U level

Dimension	Singular Value	Inertia	Chi-Square	Prob. (df=15)	Percent of Inertia	
					Account for	*Cumulative*
1	0.193	0.037	14.40		67.52	67.52
2	0.128	0.016	6.34		29.75	97.26
3	0.039	0.002	0.58		2.74	100
Total		0.055	21.33	0.127	100	

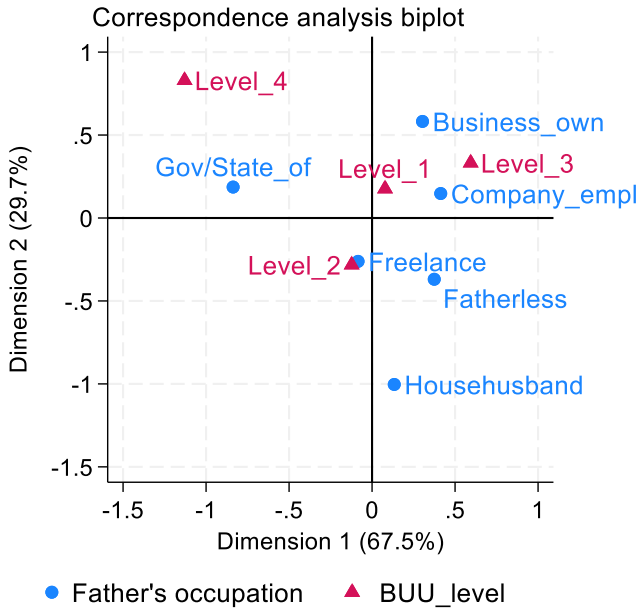

Fig. 7. Correspondence analysis biplot showing the association position of the father's occupation and the BUU-CET U level

8) Correspondence association between the mother's occupation and the BUU-CET U level

According to the correspondence analysis between the mother's occupation and the BUU-CET U level of students at Burapha University, as shown in Tables 21 and 22, it was suggested that the Chi-square value equaled 29.42 (Prob. = 0.014), which means that it accepted the alternative hypothesis at the significance level 0.05. It was implied that there was an association between the mother's occupation and BUU-CET U level, with dimensions 1 and 2 accounting for 93.65% of the inertia (Table 22). When the biplot graph was plotted to show the association position of the two variables, as shown in Fig. 8, it was found that students whose mothers were housewives had the most correspondence with the BUU-CET U level 2 and level 4, and those whose mothers worked for private companies or were business owners had the most correspondence with the BUU-CET U level 3. The BUU-CET U level 1 did not tend to correspond with any mother's occupation (Fig. 8).

Table 21. Contingency table of the mother's occupation and the BUU-CET U level

Mother's occupation	Frequency of BUU-CET U level				*Total*
	Level 1	*Level 2*	*Level 3*	*Level 4*	
Business owner	3	30	18	2	53
Gov./State officer	3	32	6	3	44
Company employee	5	39	27	6	77
Freelancer	18	79	24	11	132
Housewife	6	40	15	7	68
Motherless	3	2	6	0	11
Total	38	222	96	29	385

Table 22. Correspondence analysis of the mother's occupation and the BUU-CET U level

Dimension	Singular Value	Inertia	Chi-Square	Prob. (df=15)	Percent of Inertia	
					Account for	*Cumulative*
1	0.223	0.050	19.18		65.18	65.18
2	0.147	0.022	8.38		28.47	93.65
3	0.070	0.005	1.87		6.35	100
Total		0.076	29.42	0.014	100	

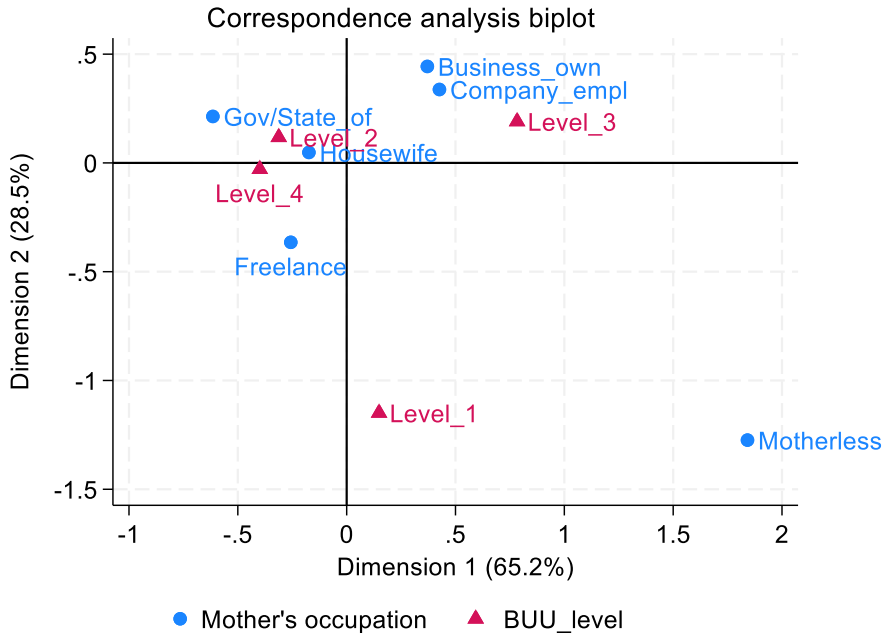

Fig. 8. Correspondence analysis biplot showing the association position of the mother's occupation and the BUU-CET U level

4. Discussion

4.1. Gender

According to the correspondence analysis, no association was found between the BUU-CET U level and the gender groups. The results agreed with the study by Rianto (2021) and Liu (2015), which found no gender difference in online English proficiency. In contrast, Rianto (2021) reported that female students used reading strategies more frequently and creatively than male students and adopted support strategies more often than males. Similarly, Pei & Pamintuan (2024) and Al-Saadi (2020) argued that females generally demonstrated better English proficiency than male students in speaking and writing. As this study found that this was not the case, it implies that teachers may not need to focus on gender as much. However, the probable reason for the results could be the balance of students in different faculties and the ratio of males to females in each. Therefore, the issue should not be dropped entirely when conducting research or designing a classroom.

4.2. Age

The correspondence biplot for age and year of study clearly showed that the older students and those with a longer year of study had higher English proficiency. It is consistent with the study of Serquina & Batang (2018), who concluded that as age increases, proficiency progresses. The reason might be that the students had taken English courses throughout the program, enhancing their skills. A study confirmed that students' English skills improved significantly during their freshman and sophomore years due to the intensive courses (Tsui, 2024). However, with a narrow gap in age and year of study, relevant research focusing on these issues was scarce, yet it was logical that this was the case.

4.3. Faculty groups

According to the faculty group, it was highly associated with English proficiency. The Health Science faculty group was closely associated with high English proficiency. These results are in line with the study of Azkiyah (2018), who showed that the students in the Faculty of Medicine achieved the highest English proficiency among the 12 faculties, and another study supporting these results indicated that students from the Faculty of Medicine received the highest score (Azkiyah et al., 2023). However, Din & Saeed (2018) argued that the faculty did not have an effect on English proficiency, but instead only had an impact on academic achievement. As the Health Science faculty group is

highly competitive for entering the university in Thailand, students must achieve relatively high scores to be accepted into the major. Moreover, the textbooks used were generally in English. As a result, the students in the field might have been more familiar with the language than the Art faculty group students, and tend to acquire better English performance.

4.4. Family income

According to the family income aspect, students from high-income families were closely associated with high English proficiency. As a result, the higher the family's income, the higher the students' English performance tended to be (Fortes et al., 2022; Nguyen et al., 2021), as the family's income level could indicate how much parents can provide a suitable environment and support for their children (Baker, 2014). Language opportunities and the time involvement of both fathers and mothers are factors that shaped children's language outcomes, and the family that supported, including providing an English environment, had influenced children's foreign language learning (Triwittayayon & Sarobol, 2018). However, some believed that learning should not only start in a family but also at school and in the community (Nafrizam & Jamaluddin, 2023). This is where the teacher's role comes in. Despite their background, opportunities, and learning environment, the students must also be aware that they are the main factor in their learning progress. They must also find their own motivation to improve and succeed (Yen et al., 2019). This is where the teacher's role steps in, helping and supporting students with positive attitudes, recognizing that there is no "one-size-fits-all" classroom without considering the diverse needs of learners (Chen & Abdullah, 2022). The teacher can become the missing piece to help students fulfill their motivation and enhance their language skills.

4.5. Parental education level

In this study, parental education level, particularly for the father, has an impact on students' English performance. Fortes et al. (2022) agreed with the results that the higher the parents' degree, the better the academic performance and English proficiency of the students. Likewise, Baker (2013) and Duursma et al. (2008) confirmed that the father's educational level influences the children's literacy, and Pei and Pamintuan (2024) also found that the father's education level has a more significant influence than the mother's. This is the case because educated parents can create a language-rich environment by engaging in English conversations, reading English books, exploring vocabulary, assisting with homework, and supporting educational resources (Ntabwoba & Sikubwabo, 2024). Parents tended to encourage their children to pursue English when they recognized the importance of the language (Rahman, 2016). Thus, higher education could help them realize the importance of learning in general and the value of learning languages.

4.6. Parental occupation

The results showed that the parental occupation was associated with English proficiency. Although the parental occupations did not show a significant difference in students at a lower level of education (Trebits et al., 2021), Fortes et al. (2022) supported that parents' jobs in high social status positively affect their children's language performance, as they recognize the importance of the English language as a tool to widen their world. Pratomo et al. (2016) suggested that children's development is highly influenced by their mothers' occupation, especially those who work as housewives, due to the amount of time spent with them, indicating that nurture plays a role in language development. This is consistent with the current study, which found that students whose mothers were housewives were associated with a high level of proficiency. Moreover, Farah (2018) suggested that occupations with high social status led to less financial stress for families and had a positive impact on children in the long run, which agrees with the result that students whose parents worked as company employees, which is considered to have good earnings, received relatively high proficiency levels in this study.

Overall, as Vygotsky (1978) suggested, learning is a social process, and the home environment serves as a primary "cultural toolkit" for a child's linguistic development. Parents with higher levels of education or in certain professions may not only possess a more sophisticated vocabulary but also actively engage in their children's learning. So, the child would majorly benefit from their background. However, the improvement in a student's language proficiency at any level relies on the role of teacher cognition; a teacher's beliefs, knowledge, and practices are critical factors that can reinforce the effects of a student's home background (Borg, 2006). For instance, a teacher who believes that a student's background is connected to their ability may unknowingly lower their expectations and create a compromising teaching method that fits, considering the diverse needs of learners (Chen & Abdullah,

2022). By integrating these theoretical aspects, we can propose actionable strategies to improve English outcomes for EFL learners.

4. Conclusion

This study revealed that demographic factors affected the English proficiency of EFL students at Burapha University, Thailand. A perceptual map of the correspondence analysis displayed the closeness of each factor's level to students' English proficiency level, in addition to the general associations. Older age groups and higher years of study were associated with students achieving higher English proficiency levels. Students from high-income families tended to have the highest English proficiency level. Parental education and occupation were also found to be associated with English proficiency. This study is therefore helpful for teachers to anticipate students' proficiency levels in relation to different demographic factors, enabling them to effectively plan teaching methods that suit the diverse needs of learners, and guide further development of EFL learners to achieve higher English language proficiency. This, in turn, will help fill a research gap in the Thai university setting and the broader educational field.

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