

Exploring the Impact of Bilingualism in Early Life on Foreign Language Learning for University Students in Lebanon - Analytics: Part II

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Abstract

This study, part of two, analyzes how growing up in a bilingual or multilingual environment impacts foreign language learning abilities, focusing on Lebanese university students. A quantitative, deductive, and positivist approach is used. The sample of 153 Lebanese university students with different majors was selected purposively and conveniently based on the students' free will participation. A survey of four sections was used. It includes knowledge questions addressing different sets of attitudinal statements characterizing the students' and their parents' status, home habits, background, and practices of the English language; the attitude of students toward the English language along the three dimensions of Towers-Perrin's ISR model; the family's attachment to books, and demographics of the participants and their parents. Questions and statements were dyadic, multiple choice, and four- and five-level Likert scales. Collected data were analyzed using the IBM SPSS version 26.0 package. Data analysis used descriptive, factor, and linear regression analyses. This paper, part 2 of 2, provides the detailed quantitative analysis necessary to test the

hypothesized research questions, review the proposed conceptual framework, and create a statistically revised framework. Results show the persistence and statistically supported Towers Perrin's ISR model as a significant contributor to students' motivation to learn a foreign language and improve performance. Most variables in the framework were statistically insignificant whereby the corresponding null hypotheses H₀₁, H₀₂, H₀₃, H₀₄, and H₀₉, were accepted (i.e., unrelated variables) and null hypotheses H₀₅, H₀₆, H₀₇, and H₀₈ were rejected (i.e., related variables). Other determinants were explored and the resultant regression model affirmed this paper's objective, i.e., bilingual students were motivated to learn a foreign language. Also, the students were encouraged by their bilingual parents who read to them at a young age. Findings contribute to theoretical and practical domains. Theoretically, the study offers insights into the relationship between early language exposure and subsequent language acquisition. The outcomes inform EFL teaching methods, curriculum design, and language policy initiatives in multilingual societies like Lebanon and others.

Keywords: Bilingualism, English as a Foreign Language, Descriptive and Inferential Analysis, Lebanon

1. Introduction

World events, commercial, social, educational, and even wars have emphasized that English proficiency as a foreign or a second language is necessary and needed. Crystal (2000) asserts that among world events, there is a growing interconnection of languages, especially English. Ludden (2015, p. 335) adds that as the global language of science and commerce, English is now spoken by one in four people worldwide, the majority of whom speak it as a second language. "There are approximately 3.3 billion bilingual people worldwide, accounting for 43% of the population with a further 17% being multilingual," according to Gratton (2023) and Jayanath (2021). In addition to these facts, scientists have debated the subject of bilingualism extensively since the 1950s (Shirley, 2016). Lebanon, a Middle Eastern country, is a well-known site where its population is bilingual and multilingual (Zakaria, 1992; Bahous, Bacha, & Nabhani, 2011; Chehimi, 2021a, b; Dbeissy and Beainy, 2022). Most of the studies in Lebanon address Lebanese bilingualism or multilingualism in the context of culture and history (Abou, 1961; Al-Shamat, 2009; Bacha and Bahous, 2011; Womack, 2012; Baladi, 2018; Chaaban, Arar, Sawalhi, et al., 2021; Chehimi, 2021b; Dbeissy and Beainy, 2022), code-switching and code-mixing (Chehimi, 2002; Chehimi, 2021a, b), and teaching and learning pedagogies for English as a foreign language (EFL) and English as a second language (ESL) (Shaaban, 1997; Shaaban and Ghaith, 1999; Bahous, Bacha, & Nabhani, 2011; Bacha and Bahous, 2011; Shaaban, 2017; Chehimi, 2021a, b; Nicolas and Annous, 2021; Dbeissy and Beainy, 2022; Chehimi and Alameddine, 2022). No other research is recorded on the influence of bilingualism at a young age on university students learning a foreign language. In light of the above-mentioned, this study is planned and executed.

The paper has four sections starting with the introduction. The second part presents the research questions and the formulation of the hypotheses, followed by part three offering a

briefing about the methodology adopted. Part four deals with a comprehensive analysis and the synthesis of the primary data collected, the conclusion, tested conceptual model, and recommendations are depicted in section four.

2. Research Questions and Hypotheses

2.1 Research Questions

1. Do parents' language skills impact their kid's foreign language learning at the university level?
2. Does early-age bilingualism affect university students' learning attitude toward the English language?
3. Do universities play a role in the performance of early bilingual students?
4. Do bilingual students' self-improvement factors affect their liking of the English language?
5. To what extent does bilingual students' engagement at the university affect their English language learning?
6. To what extent does the bilingual students' family status affect their English language learning?

2.2 Hypotheses Formulation

Research question one is used to formulate three hypotheses related to the parents' language skills.

Hypothesis One:

- Null Hypothesis H_{01} : Parents' language skills in French, Arabic/French, and Arabic/French/English do not affect their kids' English language learning.
- Alternative Hypothesis H_{a1} : Parents' language skills in French, Arabic/French, and Arabic/French/English do affect their kids' English language learning.

Hypothesis Two:

- Null Hypothesis H_{02} : Parents' language skills in English, Arabic/English, and Arabic/English/French do not affect their kids' English language learning.
- Alternative Hypothesis H_{a2} : Parents' language skills in English, Arabic/English, and Arabic/English/French do affect their kids' English language learning.

Hypothesis Three:

- Null Hypothesis H_{03} : Parents' language skills in Arabic do not affect their kids' English language learning.
- Alternative Hypothesis H_{a3} : Parents' language skills in Arabic do affect their kids' English language learning.

Research question two leads to proposing hypothesis four.

Hypothesis Four:

- Null Hypothesis H_{04} : Students' language skills at a young age in English, Arabic/English, and Arabic/English/French do not affect their English language learning.

- Alternative Hypothesis H_{a4}: Students' language skills at a young age in English, Arabic/English, and Arabic/English/French do affect their English language learning.

Research question three is used to formulate two hypotheses related to the universities and instructors teaching English language skills.

Hypothesis Five:

- Null Hypothesis H₀₅: Universities' role in teaching language skills in English does not affect their students' English language learning.
- Alternative Hypothesis H_{a5}: Universities' role in teaching language skills in English does affect their students' English language learning.

Hypothesis Six:

- Null Hypothesis H₀₆: Instructors' role in teaching language skills in English does not affect their students' English language learning.
- Alternative Hypothesis H_{a6}: Instructors' role in teaching language skills in English does affect their students' English language learning.

Question four is used to formulate hypothesis seven

Hypothesis Seven:

- Null Hypothesis H₀₇: Students' self-improvement role does not affect their students' English language learning.
- Alternative Hypothesis H_{a7}: Students' self-improvement role does affect their students' English language learning.

Question five leads to proposing the eighth hypothesis.

Hypothesis Eight:

- Null Hypothesis H₀₈: Bilingual students' engagement at the university does not affect their English language learning.
- Alternative Hypothesis H_{a8}: Bilingual students' engagement at the university does affect their English language learning.

Question six supports the formulation of Hypothesis nine.

Hypothesis Nine:

- Null Hypothesis H₀₉: Bilingual students' family status does not affect their English language learning.
- Alternative Hypothesis H_{a9}: Bilingual students' family status does affect their English language learning.

3. Materials and Method

This research follows a quantitative, deductive, and positivist approach (Hejase & Hejase, 2013). A sample of 153 Lebanese university students pursuing different majors was selected conveniently based on the participant's willingness to participate (Chehimi and Hejase, 2024a). The research tool is a questionnaire constituting four sections that include knowledge questions addressing different sets of attitudinal statements characterizing the students' and their parents' status, home habits, background, and practices of the English language; the attitude of students toward the English language along the three dimensions of Towers-Perrin-ISR model; the family's attachment to books, and demographics of the

participants and their parents. Questions and statements were dyadic, multiple choice, four-level, and five-level Likert scales (see details in Chehimi and Hejase, 2024a).

3.1 Data Analysis

According to Hejase et al. (2012), genuine, realistic, and timely information—numbers and facts—is the foundation for well-informed, objective judgments. Additionally, as per Hejase and Hejase (2013, p. 272), the purpose of descriptive statistics is to describe a set of data by reducing the volume of data into straightforward numerical values or graphs that facilitate a better comprehension of the acquired data. Tables are made using means, standard deviations, frequencies, and percentages for clarity. To evaluate the collected data, IBM's Statistical Product and Service Solutions (SPSS) version 26.0 will be utilized. Factor, regression, and chi-square cross-tabulation procedures are further inferential statistical analysis methods. Furthermore, Cronbach's Alpha is employed to evaluate the survey's internal consistency.

Results and Discussion

Demographics

The students

Results show that 45.1% of the respondents were males, and 54.9% were females. The age factor has seven (7) categories. 80% of the respondents were 18 to 21 years of age, 9.2% were 22 to 35 years old, 2% were less than 18 years old, and 6% were 26 to 31 years old. In addition, 19.7% were completing their sophomore year, 59.5% their junior year, and 20.9% were seniors. Moreover, 82.4% of the sample had between 10 to 15 years of foreign language schooling, 9.8% had 7 to 9 years, and 7.8% had 1 to 6 years of such schooling. Furthermore, 46.3% were 4 to 6 years old when they initiated their schooling with a foreign language, 13% were 7 to 9, and 35.5% were nine (9) years or older. Therefore, those results illustrate that the grand majority of participants in this research were bilingual or trilingual.

The parents

Results show that the age factor for both parents has five (5) categories. 15% of the respondents' fathers were 36 to 45 years of age while 38.6% of the respondents' mothers were of the same category; 77.1% of the fathers were 46 to 65 years old while 59.5% of the mothers were of the same category; and 7.9% of the fathers and 2% of the mothers were more than 66 years old. In addition, 41.8% of the fathers and 37.2% of the mothers completed intermediary schooling or lower, 20.3% of the fathers and 29.4% of the mothers completed their secondary schooling, 25.5% of the fathers and 20.3% of the mothers earned their bachelor's degree, 9.8% of the father and 12.4% of the mothers earned their Master's degree, and finally 2.6% of the fathers and 0.7% of the mothers held a doctorate.

As for the parents' status in terms of languages spoken, 43.8% of the fathers labeled themselves monolingual (only mother language or Arabic), while 56.2% labeled themselves multilingual whereby 19.6% spoke Arabic and English; 17.4% labeled themselves bilingual in Arabic and French, 14.4% labeled themselves trilingual in Arabic, English, and French, and 48.4% declared bilingual or trilingual in other languages combinations including besides

Arabic, Turkish, Spanish, Persian, or other. Similarly, mothers described their spoken languages as follows: 38.6% labeled themselves monolingual (only mother language or Arabic), while 61.4% labeled themselves multilingual whereby 22.9% spoke Arabic and English; 25.5% labeled themselves bilingual in Arabic and French, 8.5% labeled themselves trilingual in Arabic, English, and French, and 43.2% declared bilingual or trilingual in other languages combinations including besides Arabic, Turkish, Spanish, Persian, or other.

Moreover, 52.9% of the fathers and 28.1% of the mothers work in the service sector, 32% of the fathers and 15.7% of the mothers work in the public sector, and 15% of the fathers work with the armed forces, while 56.2% of the mothers are house makers. Furthermore, 21.6% and 26.8% of the fathers and mothers earned less than 300 USD, respectively; 29.4% and 13.1% earned 301 to 600 USD, respectively; 30.7% and 4.6% earned between 601 and 900 USD, and 18.3% and 5.3% earned more than 900 USD.

Student Family Status

Results show that 75.8% of the students own less than 100 books at home. The grand majority (95.4%) have less than 20 books in their library. Such a result is because students belong to Gen. Z. According to Duffy (2023), "This generation, defined as people born between 1997 and 2015, is often considered phone-obsessed and addicted to technology" (para 4). However, one possible reason for not owning too many books is the harsh and terrible economic and financial states in Lebanon for the last five years before many students joined their universities. Moreover, results show that 64.7% of the students have books in Arabic, 7.8% in English, and 20.9% bilingual in Arabic/English. The remaining percentage includes French or other languages.

Family size and status within the family

Figure 1 shows that most students belong to families with 5 or 6 members, about 11% with four (4) members, about 15% with seven (7) members, and the remaining distributed among families with less than four (4) or more than seven (7) members.



Figure 1. Distribution of family sizes

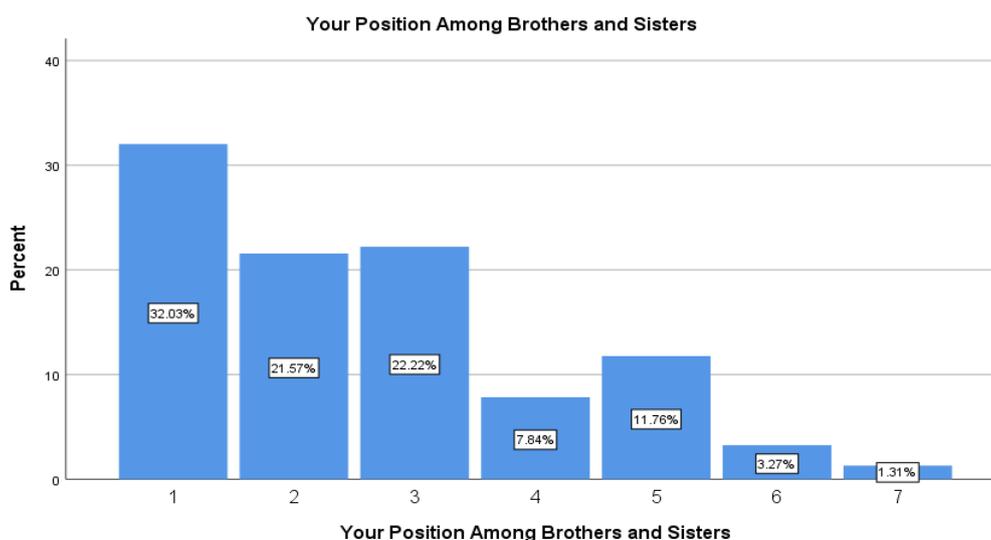


Figure 2. Students' position among their siblings

Figure 2 illustrates that 32% of the students are the eldest, 21.6% are second siblings, 22.2% are 3rd siblings, 11.8% are 5th siblings, and the remaining 12.4% are 4th, 6th, or 7th. This information helps assess if the students, while growing, learn from their elder siblings (Bridges and Hoff, 2014).

Students' Habits in Using a Foreign Language

Music

Students (37.90%) listen to songs with a mix of languages that include Persian, Turkish, and Spanish. 30.10% listen to English songs, 20.9% do not listen, and the remaining 11.10% listen to various mixes of French, English and French, English and Arabic, French and Arabic, and English, French, and Arabic.

As for memorizing foreign songs, 34.60% chose English, 31.40% chose Persian, Turkish, and Spanish, 23.5% did not, and the remaining 10.50% a variety of mixed languages.

Watching foreign movies

Most students watch English-speaking films (66.70%), 24.80% in Persian, Turkish, Arabic, and other languages, and 8.50% watch French, Spanish, and mixed-language films.

Reading translations when watching foreign movies

A grand majority of 87.50% read subtitles in Arabic and 12.40% do not.

Home Habits

Talking with brothers and sisters in a foreign language

Most students (97 out of 153), or 63.40%, use Arabic at home to address each other. The remaining use mixes of languages like Persian, Turkish, or other (15%), English (9.8%), French (2.6%), bilingual (mixing Arabic with English and French) with 5.30%, bilingual mix of English and French (2.60%), and trilingual with 1.3%.

Reading Habits by Parents to Children at a young age

Results show that 51% of the fathers and 33.30% of the mothers did not read to their children at a young age. However, 17% of the fathers and 27.50% of the mothers read in Arabic, 8.5% versus 12.4% read in English, respectively, 5.2% versus 7.2% read in French, respectively, 13.10% versus 14.4% read in Persian, Turkish, or Spanish respectively, and the remaining (for both parents) used mixes of languages with 5.3%.

Students love foreign languages

Results show that 62.70% of the respondents always liked English from a young age versus 37.30% who did not; 25.50% of them used the appropriate accent. On the other hand, 20.30% of the respondents liked French using the accent.

Attitude towards the English language

The different survey components' responses were evaluated using a condensed 2-level Likert scale (grouping for simplicity of the analysis), where 'Agreement' is the total of "SA: Strongly Agree" and "A: Agree" and 'Disagreement' is the total of "D: Disagree" and "SD: Strongly Disagree," and so on. Section one consists of five parts. Hence, the analysis follows each part individually.

Attitude towards Satisfaction and Significance of the English language

Table 4: Attitude towards Satisfaction and Significance of the English language

No.	Statement	A	D	Mean	Std. Dev.
11	Satisfied with English Courses at the University	86.90	13.10	3.39	0.933
12	Gained Necessary Knowledge of English to Perform Better in Other Courses	86.20	13.80	3.44	0.973
13	Feeling Comfortable Communicating in English	52.90	47.10	2.53	1.323
14	Using English to Converse with Classmates	40.50	59.50	2.20	1.246
15	Using English to Converse with Friends when Socializing	32.00	68.00	2.13	1.168
16	Speaking in English Gives Me a Sense of Achievement	82.30	17.70	3.27	1.053
17	Have More Confidence when Speaking in English	55.50	44.50	2.68	1.286
18	Knowing Well the Importance of English Courses to the Major Pursued	95.40	04.60	3.57	0.705
19	Like English Courses Because of Being Aware These Will Improve Performance	90.20	09.80	3.46	0.827
20	Teachers Use an Attractive Teaching Style in My English Courses	92.80	7.20	3.41	0.774
21	Being Proficient in English Improves Future Job Opportunities	98.00	2.00	3.59	0.602
22	Asking Class Questions Using English Language	61.40	38.60	2.78	1.237
23	Having a Good Understanding of Major's Topics	79.70	20.30	3.21	1.049

	When Delivered in English				
24	Mixing English and Arabic When in Class	90.90	09.10	3.58	0.766

Table 4 shows that students were aware of the impact of English language proficiency on future job opportunities (98% agreed, mean=3.59, std dev=0.602), the importance of their major pursued (95.4% agreed, mean=3.57, std dev=0.705), and the direct impact on their performance improvement as they proceed in their education (90.20%, Mean=3.46, std dev=0.827). Moreover, results show that students were satisfied with their instructors (92.80%, Mean=3.41, std dev=0.774), with their mixed use of English and Arabic in class (90.90%, Mean=3.58, std dev=0.766), their improvement of English knowledge (86.20%, mean=3.44, std dev=0.973), and an overall positive view towards their English courses at the University (86.90%, mean=3.39, std dev=0.933). On the other hand, students were not very happy about using English to converse with classmates or friends while socializing.

Student English language background

This part uses a condensed 3-level Likert scale (grouping for simplicity of the analysis), where 'High' is the total of "TGE: To a Great Extent and TSE: To Some Extent" and 'Low' is the total of "TSE: To a Smaller Extent and TLE: To a Lesser Extent."

Table 5: Respondents' Proficiency in Languages

No.	Statement	H	I	L	Mean	Std. Dev.
25	Proficient in Arabic	90.80	07.20	02.00	4.48	0.796
26	Proficient in English	47.10	29.40	23.50	3.29	1.030
27	Proficient in French	13.10	08.50	78.40	1.67	1.224
28	Proficient in Arabic & English (Bilingual)	53.40	25.60	21.00	3.36	1.083
29	Proficient in Arabic & French (Bilingual)	14.50	08.50	77.00	1.84	1.240
30	Proficient in Arabic & English & French (Trilingual)	10.60	10.50	78.90	1.83	1.034
31	Proficient in Arabizi (Foreign Letters with Numbers)	85.50	07.90	06.60	4.45	1.060

Respondents demonstrate their high attachment to the proficiency in their mother language Arabic (90.80%, mean=4.48, std dev=0.796) followed by their marginal proficiency in English (47.10%, mean=3.29, std dev=1.030) and their marginal bilingualism in English and Arabic (53.40%, mean=3.36, std dev=1.083). Such a result does not reflect the students' high interest in improving their English language and instead leads us to think that they are obliged to study English as a foreign language (EFL). An interesting result is the high values provided to the chat language Arabizi (85.50%, mean=4.45, std dev=1.060). This last result shows that Lebanese students are highly active on their mobile and online communication by chatting, which may negatively affect their concentration on learning English. The remaining results show that the sample of students in this study are not proficient in French nor bilingual in Arabic and French.

According to Karim El-Mufti, researcher and law professor at Université Saint-Joseph, "To

avoid penalizing students who do not speak French effectively, teachers must be adaptable, i.e., "students struggle to express themselves in French, we allow them to sit for some exams in Arabic or English," It dawns on us then that most of the tests are administered in Arabic. The transcription of internship reports, which are consistently written in Arabic rather than English, is likewise subject to this rule" (El-Hage, 2019, para 11). Moreover, observing the high proficiency in Arabic and the high level of indifference percentages of 29.40% in English and 25.60% in bilingual Arabic/English conforms to Butzkamm and Caldwell's results (2009) that L1 serves as "an indispensable Language Acquisition Support System" (p. 66), and the British Council's (2015) fact that "Students taking courses using a bilingual context frequently suffer from students' indifference towards learning English based on unclear perspectives on the relevance of English learning."

Parents' Proficiency in Languages

This part uses a condensed 3-level Likert scale (grouping for simplicity of the analysis), where 'High' is the total of "TGE: To a Great Extent and TSE: To Some Extent" and 'Low' is the total of "TSE: To a Smaller Extent and TLE: To a Lesser Extent."

Table 6: Respondents' Parents' Proficiency in Languages

No.	Statement	H	I	L	Mean	Std. Dev.
Mother						
32	Proficient in Arabic	87.50	08.50	04.00	4.47	0.837
33	Proficient in English	15.10	23.70	61.20	2.22	1.180
34	Proficient in French	20.40	19.10	60.50	2.21	1.325
35	Proficient in Arabic & English (Bilingual)	19.70	25.70	54.60	2.30	1.346
36	Proficient in Arabic & French (Bilingual)	21.70	20.40	57.90	2.41	1.215
37	Proficient in Arabic & English & French (Trilingual)	11.20	16.40	72.40	1.89	1.068
38	Proficient in Arabizi (Foreign Letters with Numbers)	29.60	16.40	54.00	2.59	1.444
Father						
39	Proficient in Arabic	84.20	08.60	07.20	4.36	0.960
40	Proficient in English	17.10	21.70	61.20	2.27	1.297
41	Proficient in French	17.70	17.10	65.20	2.08	1.330
42	Proficient in Arabic & English (Bilingual)	20.10	26.60	53.30	2.15	1.291
43	Proficient in Arabic & French (Bilingual)	18.50	20.40	61.10	2.44	1.275
44	Proficient in Arabic & English & French (Trilingual)	11.20	15.80	73.00	1.88	1.121
45	Proficient in Arabizi (Foreign Letters with Numbers)	22.40	16.40	61.20	2.33	1.385

Table 6 demonstrates that both parents are proficient with the mother language (Arabic) with 87.50% and 84.20%, respectively. In addition, fathers were more proficient in English and Bilingual Arabic/English (17.10% and 20.10%) and compared to mothers (15.10% and

19.70%), respectively. As for proficiency in French, mothers were more proficient in French and Bilingual Arabic/French (20.40% and 21.70%) in comparison to fathers (17.70% and 18.50%), respectively. Both parents were trilingual equally in Arabic/English/French (11.20%). Finally, both parents were not proficient in using Arabizi, 54% for mothers and 61.20% for fathers. These results lead us to assert that Lebanese, during the last two decades, have been switching from French to English education. El-Hage (2019) posits, "Twenty years ago, 70% of Lebanese school students studied in French. Today, that number has fallen to around 50% and is declining every year" (para 1). Moreover, El-Hage quoted Karim El-Mufti, researcher and law professor at Université Saint-Joseph, saying, "Most of the time, the decline in French is happening at the benefit of Arabic" (para 10). El-Hage contends that the kids from less fortunate homes who have not attended prestigious French-medium institutions are particularly affected by the issue. However, according to Prof. Mohammad Ayoub Chehimi (Retired Professor in Psychology and Sociology), many middle-class families preferred to send their daughters to prestigious philanthropic French schools and their sons either to public schooling in English or French and lower-class English private schools. Therefore, since parents in this study are 46 to 65 years (77.1% fathers and 59.5% mothers), the above results may apply.

Use of Foreign languages at home by parents

This part uses a condensed 3-level Likert scale (grouping for simplicity of the analysis), where 'High' is the total of "TGE: To a Great Extent and TSE: To Some Extent" and 'Low' is the total of "TSE: To a Smaller Extent and TLE: To a Lesser Extent."

Table 7: Use of Foreign languages at home by parents

No.	Statement	H	I	L	Mean	Std. Dev.
46	Parents Read to Me in English at a Young Age	12.40	16.30	71.30	1.89	1.206
47	Parents Talked to Me in English at a Young Age	06.60	13.10	80.30	1.67	1.000
48	Parents Read to Me in French at a Young Age	07.80	06.60	85.60	1.53	1.045
49	Parents Talked to Me in French at a Young Age	07.90	04.60	87.50	1.48	1.046
50	Parents Read to Me in Arabic at a Young Age	73.20	12.40	14.40	4.06	1.329
51	Parents Talked to Me in Arabic at a Young Age	86.90	07.80	05.30	4.33	0.960

Results from Table 7 confirm two aspects; the first is the heavy reliance on the mother tongue or Arabic, whereby parents read to their kids and talk to them at home with 73.20% and 86.90%, respectively. This first result supports an early finding that parents read to their kids in Arabic more than in foreign languages. The second aspect shows that parents use English more than French as the second foreign language. However, these results, irrespective of the language used, confirm that the student participants in this research were read to when they were young. These findings conform with research about reading habits and their consequent impact on language learning. Reading is a habit, if cultivated during early childhood, creates a motivation for continuity (Flood, 2014; A. Hejase et al., 2019; H. Hejase et al., 2020) and improves a sense of appreciation of languages if such reading is performed by parents and

later by the children using a multilingual approach. Children's Bureau (2023) contends in their Blog, "Reading to young children daily, beginning in infancy, aids the development of language, communication, social, and literacy abilities. This is because such an early reading stimulates the area of the brain that aids in language comprehension and the development of important literacy, social, and linguistic skills" (para 6).

Cognitive, Affective, and Behavioral Attitudes towards the English Language

The different survey components' responses were evaluated using a condensed 2-level Likert scale (grouping for simplicity of the analysis), where 'Agreement' is the total of "SA: Strongly Agree" and "A: Agree" and 'Disagreement' is the total of "D: Disagree" and "SD: Strongly Disagree," and so on. As mentioned in the survey design, section one consists of five parts. Therefore, the analysis covers each part.

Table 8: Cognitive Thinking

No.	Statement	A	D	Mean	Std. Dev.
52	Inspired by Objectives of English Classes	92.10	7.90	3.24	0.630
53	Understand How My Efforts Contribute to Course Goals	93.40	6.60	3.32	0.614
54	Find My Values & University Values Similar	83.60	16.40	3.07	0.627
55	See a Fit Between My Needs & English Courses	82.90	17.10	3.16	0.798
56	Feel Like Having Sense of Belonging in English Classes	78.30	21.70	3.14	0.798
57	Look Forward to coming to My English Courses Always	81.60	18.40	3.18	0.885

Cognitive thinking is the first component of the adopted Towers Perrin's ISR Model for academic engagement. As Table 8 shows, cognitive thinking component had six different statements. " Inspired by objectives of English classes " with 92.1% of the respondents agreeing (mean of 3.24 and std. of 0.9630). As for the second statement (Understanding how my efforts contribute to course goals), 93.4% of the respondents agreed (mean was 3.32, and std. of 0.614). The third statement had 83.6% agreement (mean was 3.07 and std. 0.933). 82.9% agreed with statement four (mean of 4.19 and std. of 0.973). As for the fifth statement (Feel like having a sense of belonging in English classes), it had 78.3% agreement, where its mean was 3.14, and its std. was 0.798. Finally, the last statement had an agreement of 81.60% (mean of 3.18 and std. of 0.885). The overall mean for the above statements representing component one (1) is 3.185, with 0.725 as the standard deviation.

Table 9: Affective Feeling

No.	Statement	A	D	Mean	Std. Dev.
58	Feeling Satisfied with the Teaching Provided by Teachers	94.70	05.30	3.50	0.620
59	Enjoying My English Classes	84.20	15.80	3.29	0.760

60	Satisfied with Grades Gotten in English Classes	78.30	21.70	2.94	0.730
61	Confident in the University's Future	94.10	05.90	3.43	0.605
62	Feeling Respected by Peers and Teachers	97.40	02.60	3.58	0.593

The affective feeling component is the second component of the engagement model. Table 9 shows that the first statement (I feel satisfied with the teaching provided by the teachers) had 94.7% of the respondents agree with it (mean of 3.50 and std. dev. of 0.620). The second statement had 84.2% agreement (mean is 3.29, and std. dev. is 0.760). "Satisfied with the grades gotten in English courses" is the third statement with 78.3% agreement (has 2.94 as the mean and 0.730 as std. dev.). The fourth statement (Confident in the University's future) has 94.1% of the respondents agreeing with it (mean is 3.43 and std. dev. is 0.605). Finally, the last statement in this component had 97.4% agreement (mean of 3.58 and std. dev. of 0.593). The overall mean for the above statements representing component two (2) is 3.348, and 0.662 is the standard deviation.

Table 10: Behavioral Acting

No.	Statement	A	D	Mean	Std. Dev.
63	Willing to Do More Than What is Required in English Courses	79.60	20.40	3.14	0.814
64	Currently Willing to Continue in English Courses	95.40	04.60	3.43	0.582
65	Do What Represents My Beliefs and Feelings in the Classroom	86.80	13.20	3.17	0.659
66	Seek to Have an Impact on the English Courses' Success	90.10	09.90	3.20	0.662
67	Committed to Giving My Best at Assignments and Exams	93.40	06.60	3.51	0.661

The behavioral acting component is the third component of the academic engagement model whose results are illustrated in Table 10. It has five (5) statements. "Willing to do more than what is required in English courses" is the first statement, where 79.6% of the respondents agreed (mean is 3.14 and std. dev. of 0.814). The second statement (Currently willing to continue in English courses) had 95.4% agreement (mean is 3.43, and std. dev. is 0.582). The third one had 86.8% agreement (mean is 3.17 and std. dev. is 0.659). Furthermore, the fourth statement in this component had 90.1% agreement (mean is 3.20, and std. dev. is 0.662). The last statement in the survey in this component, "Committed to giving my best at assignments and exams," 93.4% of the respondents agreed to it (mean is 3.51 and std. dev. of 0.661). The overall mean for the above statements representing component three (3) is 3.29, and 0.676 as the standard deviation.

Analysis of the extent of student academic engagement applying the Towers Perrin-ISR model in this research depends on the overall outcomes of the 5-level Likert scale assessment. As shown earlier, there are sixteen statements in the questionnaire. Each set represents one of the three components of Towers Perrin's ISR model. Table 8 shows the summary results.

Table 11. Analysis of Towers Perrin-ISR model

Component	Overall Mean	Overall Std. Dev.
Component 1: Cognitive Thinking	3.19	0.725
Component 2: Affective Feeling	3.35	0.662
Component 3: Behavioral Acting	3.29	0.676

Taking a parallel argument to Towers Perrin (2015, p. 5), —engagement by employees' willingness—, is students' academic engagement and ability to contribute to English courses' success. That is, proposed and applied in this work, the authors posit, "Engagement refers to how much a student goes above and beyond in their academic pursuits, investing more of their vigor, imagination, and enthusiasm in their roles as learners" (authors of this study). This research illustrates that the three components (Kotni, 2011, p. 32) needed to achieve student engagement satisfy the needs of the universities involved, whereby these components' scores fall in the range of 'agree and strongly agree' per the Likert scale used [3: Agree, and 4: Strongly Agree]. The cognitive thinking scored 3.19 (std. dev. = 0.725), the affective feeling scored 3.35 (std. dev. = 0.662), and the behavioral acting scored 3.29 (std. dev. = 0.676), as Table 11 shows. Also, "agrees with—rational (thinking), emotional (feeling), and motivational (acting)" Towers Perrin (2015, p. 5). In addition, when comparing the above results in Table 11, the second and third components are salient when compared to the first, leading to the fact that these universities' students scow towards feeling and acting more than thinking. Returning to the Towers Perrin-ISR Model for engagement, — "The emotional, affective feeling component taps into whether the incumbents have a sense of belonging and pride in the courses and the university they are in" (Towers Perrin, 2015, p. 8). Moreover, attaining "buy-in" status means, engaged students' 'buy-in' is a positive sense of pride in their association with either the English courses or the university. Furthermore, the affective feeling correlates closely with institutional loyalty (Knight, 2011). Also, in the Towers Perrin-ISR Model (2015), the 'behavioral acting' dimension captures the outcomes that students desire, such as retention and willingness to go the extra distance when needed for the university to create a better product, service, or student experience" (p. 2). In addition, the 'behavioral acting' component consists of the actions the students display within their universities that reinforce their beliefs and feelings (Knight, 2011). Such a marked inclination towards the second and third components among the Lebanese universities' students is justified as follows: The hardships that Lebanon is passing through affect the choice of similar majors in other universities, the limited possibilities for students to transfer between universities, and the current harsh socio-economic conditions (Rkein et al., 2022a, b) exert pressure on students to retain their status and perform to graduate and seek future careers. Therefore, students decide to perform as best as it is possible to them.

Notwithstanding, the mean for the first dimension does not insinuate to ignore the Thinking dimension; it is in the agreement range. Therefore, its effect is as expressed in the students' responses. Cognitive thinking happens in the Towers Perrin's ISR Model for engagement when a student experiences the HEI's "Alma Mater," expressed in the mission, values, and goals. That leads to a sense of belonging and an effective contribution to the academic program and the university (Knight, 2011). It has to do with how rationally students assess

the aims and principles of the university. The drivers of "Sustainable engagement, which focus almost entirely on the cultural and relational aspects of the curriculum," are thus the central theme of this component (Towers Watson, 2012, p. 7).

Internal Reliability

The Cronbach Alpha recorded 0.867 (number of items = 57, Table 12), which means, according to the thumb rule is considered very good, statistically significant, and reliable (Burns and Burns, 2008, p. 481; Hejase and Hejase, 2013, p. 570). Moreover, Cronbach's Alpha, if an item is deleted when performing an item-total statistics assessment, varies between 0.856 and 0.865. Moreover, Chehimi et al. (2019) contend that the aforementioned indicates "an excellent strength of association and supports the suitability and selection of the questions for the questionnaire purpose" (p. 1915).

Table 12: Reliability statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.863	.867	57

Factor Analysis

Principal Component Analysis (PCA) was used for the testing, followed by Varimax rotation. After removing variables that did not fit into the components, from the 57 questionnaire items, 38 items remained. The first run produced six (6) factors with satisfactory results and a total variance of 58.523%.

Table 13: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.810	17.921	17.921	6.810	17.921	17.921	5.713	15.034	15.034
2	5.895	15.514	33.435	5.895	15.514	33.435	4.212	11.084	26.118
3	3.465	9.118	42.553	3.465	9.118	42.553	4.019	10.577	36.695
4	2.399	6.314	48.867	2.399	6.314	48.867	3.703	9.744	46.439
5	1.932	5.085	53.951	1.932	5.085	53.951	2.821	7.424	53.863
6	1.737	4.572	58.523	1.737	4.572	58.523	1.771	4.660	58.523

Extraction Method: Principal Component Analysis.

Principal Component Analysis with Varimax Rotation

The inspected correlation matrix concludes that the matrix is suitable for factoring. The approximate Chi-square for the Bartlett test of Sphericity is significant ($\chi^2 = 3501.546$, $df = 703$, Sig. = 0.000), and the Kaiser-Meyer-Olkin measure of sampling adequacy is equal to 0.766 (far beyond 0.60). Therefore, "the variables are correlated with each other, and the grouping of variables is possible" (Burns & Burns, 2008; Coakes, 2013). Moreover, the anti-image correlation matrix reveals that "all measures of sampling adequacy (MSA) are

greater than the acceptable level of 0.5” (Coakes, 2013, p. 133).

Table 14: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.766
Bartlett's Test of Sphericity	Approx. Chi-Square	3501.546
	df	703
	Sig.	.000

Factor analysis communalities varied from 0.309 to 0.754. Burns & Burns (2008) assert that "Communalities show how much of the variances in each variable have been accounted for the extracted factors" (p. 455). For example, "Feeling Respected by Peers and Teachers," accounted for 30.9% of the variance, and "Look Forward to Come to My English Courses Always" accounted for 62.8%, among other examples. Table 13 displays the total variance explained and the cumulative percentages. Eigenvalue analysis shows that six (6) factors extracted with eigenvalues greater than 1 (Figure 3). Extracting the six factors means that 58.523% of the variance would be explained. Also, Figure 1 illustrates the Scree plot with six factors suggesting the existence of one predominant factor accompanying five other factors whose eigenvalues are more than 1, retaining the six factors consistent with Kaiser's Rule (Burns & Burns, 2008, p. 456). So, according to the above statistics, one can't certainly relate the variables. More data are needed, and thus the interpretation is difficult. Therefore, a chosen rotation is needed. The Varimax Rotation results are not shown per se but are illustrated in the resultant six factors in Table 15.

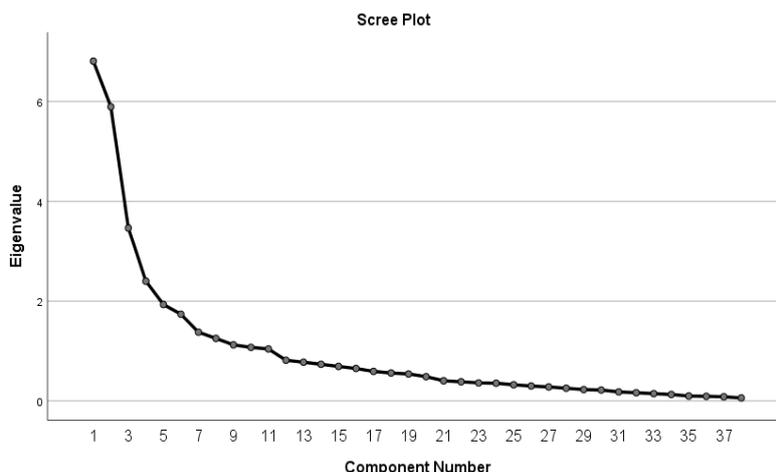


Figure 3. Eigenvalues Screen plot

Interpretation of Factors

Table 15 reports the Structure Matrix resulting from Varimax rotation results, where "the factor axes are kept at right angles to each other. This rotation is of choice to solve negative signs in most factors. Ordinarily, according to Hejase et al. (2014), "rotation reduces the number of complex variables and improves interpretation" (p. 1573). Table 15 illustrates the final step of the Factor analysis process by discussing the resultant factors and showing their

respective elements. Factor 1 (loaded with 15 items) is labeled "Student Engagement," accounting for 15.034% of the total variance (see Table 13). Factor 2 (loaded on seven (7) items) is labeled "Parent's Language Proficiency in French & Arabic/French," accounts for 11.084% of the total variance. The third factor (loaded with seven (7) items) labeled "Parent's Language Proficiency in English & Arabic/English" accounted for 10.577% of the total variance. The fourth factor (loaded with five (5) items), labeled "Students' Language Proficiency" accounts for 9.744% of the total variance. The fifth factor (loaded with four (4) items) labeled "Students' Family Status" accounted for 7.424% of the total variance. The sixth factor (loaded with two (2) items), labeled "Parent's Arabic Language Influence" accounts for 4.660% of the total variance.

Table 15: Interpretation of Factors Components

% of Variance	Component	Load
15.034%	Factor 1: Student Engagement (3 Components: 15 Elements)	
	<i>Cognitive Thinking</i>	
	Inspired by Objectives of English Classes	0.720
	Understand How My Efforts Contribute to Course Goals	0.746
	See a Fit Between My Needs & English Courses	0.627
	Feel Like Having Sense of Belonging in English Classes	0.768
	Look Forward to Coming to My English Courses Always	0.781
	<i>Affective Feeling</i>	
	Feeling Satisfied with the Teaching Provided by Teachers	0.655
	Enjoying My English Classes	0.716
	Confident in the University's Future	0.458
	Feeling Respected by Peers and Teachers	0.419
	<i>Behavioral Acting</i>	
	Willing to Do More Than What is Required in English Courses	0.622
	Currently Willing to Continue in English Courses	0.660
Seek to Have an Impact on the English Courses' Success	0.662	
Committed to Giving My Best at Assignments and Exams	0.580	
11.084	Factor 2: Parent's Language Proficiency in French & Arabic/French - PLPFAF (7 Elements)	
	Mother is Proficient in French	0.778
	Father is Proficient in French	0.756
	Mother is Proficient in Arabic & French (Bilingual)	0.695
	Father is Proficient in Arabic & French (Bilingual)	0.778
	Mother is Proficient in Arabic & French & English (Trilingual)	0.629
	Father is Proficient in Arabic & French & English (Trilingual)	0.705
Mother's Education	0.428	
	Factor 3: Parent's Language Proficiency in English & Arabic/English - PLPEAE (7 Elements)	
Mother is Proficient in English	0.702	

10.577	Father is Proficient in English	0.661
	Mother is Proficient in Arabic & English (Bilingual)	0.681
	Father is Proficient in Arabic & English (Bilingual)	0.685
	Parents Read to Me in English at a Young Age	0.782
	Parents Talked to Me in English at a Young Age	0.760
	Father's Education	0.472
9.744	Factor 4: Students' Language Proficiency - SLP (5 Elements)	
	Proficient in French	0.856
	Proficient in Arabic & French (Bilingual)	0.824
	Proficient in Arabic & French & English (Trilingual)	0.699
	Parents Read to Me in French at a Young Age	0.773
	Parents Talked to Me in French at a Young Age	0.807
7.424	Factor 5: Students' Family Status – SFS (4 Elements)	
	Total Number of Family Members Including You	0.642
	Your Position Among Brothers and Sisters	0.804
	Age - Father	0.783
	Age - Mother	0.814
4.660	Factor 6: Parent's Arabic Language Influence – PALI (2 Elements)	
	Parents Read to Me in Arabic at a Young Age	0.806
	Parents Talked to Me in Arabic at a Young Age	0.759

Table 15 allows the generation of weights (or loads) of the six main components. Therefore, carrying out a weighted sum assessment using factor analysis results, the following outcomes are generated as shown in Exhibit 3.

Exhibit 3: Transformation of variables to the six determinant components

WeightedCT=SUM(COGTHINK1*0.72,COGTHINK2*0.746,COGTHINK4*0.627,COGTHINK5*0.768,COGTHINK6*0.781).

WeightedAF=SUM(AFFECTFEEL1*0.655,AFFECTFEEL2*0.716,AFFECTFEEL4*0.458,AFFECTFEEL5*0.419).

WeightedBA=SUM(BEHAVACTING1*0.622,BEHAVACTING2*0.660,BEHAVACTING4*0.662,BEHAVACTING5*0.580).

WeightedPLPFAF=SUM(ELBackgroundP5*0.778,ELBackgroundP6*0.756,ELBackgroundP7*0.695,ELBackgroundP8*0.778,ELBackgroundP11*0.629,ELBackgroundP12*0.705,DemographicsParents4*0.428).

WeightedPLPEAE=SUM(ELBackgroundP3*0.702,ELBackgroundP4*0.661,ELBackgroundP9*0.681,ELBackgroundP10*0.685,LANGatHOME1*0.782,LANGatHOME2*0.760,DemographicsParents3*0.472).

WeightedSLP=SUM(ELBackgroundMe3*0.856,ELBackgroundMe4*0.824,ELBackgroundMe6*0.699,LANGatHOME3*0.773,LANGatHOME4*0.807).

WeightedSFS=SUM(NoFamilyMembers*0.642,PositionWithintheFamily*0.804,DemographicsParents1*0.783,DemographicsParents2*0.814).

WeightedPALI=SUM(LANGatHOME5*0.806,LANGatHOME6*0.759).

Proposed conceptual framework

Based on the six factors generated, a framework is constructed with the dependent variable being 'I like my English courses because I am aware of how these will improve my performance.' Figure 4 illustrates the relationship.

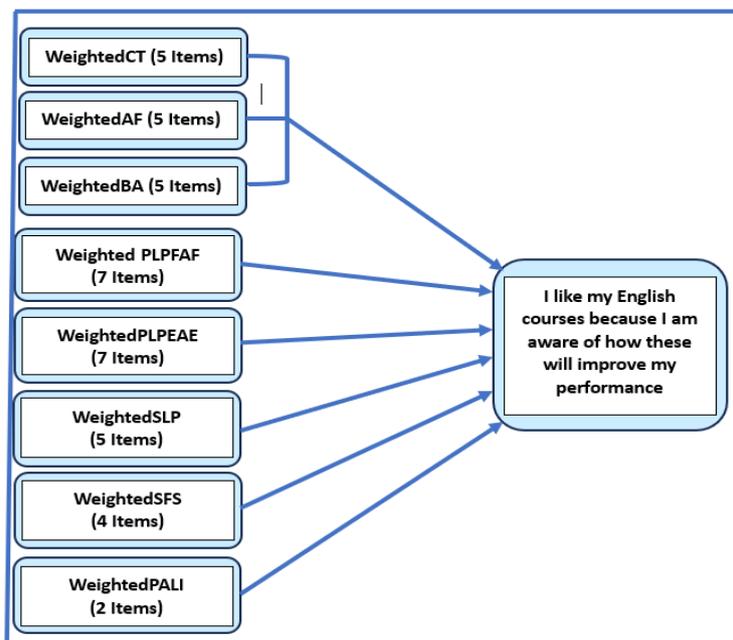


Figure 4. Proposed Conceptual Framework

Cross Tabulations Using Chi-Square Independence Test

The proposed conceptual framework elements represent six hypotheses formulated for this research. Table 16 illustrates the results of testing these hypotheses.

Table 16: Chi-Square test for independence

	Chi-Square Value	df	Asymptotic Significance (2-sided)	Pearson's R	Approximate Significance	Decision For Independence
Like English Courses Because of Being Aware These Will Improve Performance * WeightedCT	264.838 ^a	198	.001	0.321	0.000	Reject H ₀₈ Accept Ha ₈
Like English Courses Because of Being Aware These Will Improve Performance * WeightedAF	158.824 ^a	108	.001	0.227	0.005	Reject H ₀₈ Accept Ha ₈
Like English Courses Because of Being Aware These Will Improve Performance * WeightedBA	167.158 ^a	117	.002	0.235	0.003	Reject H ₀₈ Accept Ha ₈

Like English Courses Because of Being Aware These Will Improve Performance * WeightedPLPFAF	336.691 ^a	342	.571	-.073	0.368	Accept H ₀₁ Reject H _{a1}
Like English Courses Because of Being Aware These Will Improve Performance * WeightedPLPEAE	433.986 ^a	384	.040	-.104	0.201	Reject H ₀₂ But the relationship is insignificant
Like English Courses Because of Being Aware These Will Improve Performance * WeightedSLP	138.274 ^a	183	.994	.078	0.341	Accept H ₀₄ Reject H _{a4}
Like English Courses Because of Being Aware These Will Improve Performance * WeightedSFS	211.214 ^a	234	.855	0.124	0.128	Accept H ₀₉ Reject H ₀₉
Like English Courses Because of Being Aware These Will Improve Performance * WeightedPALI	48.170 ^a	51	.587	0.067	0.410	Accept H ₀₃ Reject H _{a3}

According to Table 16, the first three relationships are statistically dependent and represent students' engagement based on the Towers Perrin Engagement model. These three relationships support the eighth alternative hypothesis, H_{a8}. That means students' engagement at the university affects their English language learning (students liking their English courses leads to better performance). The second alternative hypothesis is also not rejected, H_{a2}, that is, parents' language skills in English, Arabic/English, and Arabic/English/French affect their kids' English language learning. However, when testing the strength of the relationship using Pearson's correlation, results support its statistical non-significance. Table 16 also supports the acceptance of independence of the remaining relationships therefore, accepting the null hypotheses H₀₁, H₀₃, H₀₄, and H₀₉. Hence, the Null Hypothesis H₀₁: Parents' language skills in French, Arabic/French, and Arabic/French/English do not affect their kids' English language learning; H₀₃: Parents' language skills in Arabic do not affect their kids' English language learning; H₀₄: Students' language skills at a young age in English, Arabic/English, and Arabic/English/French do not affect their English language learning; and H₀₉: Bilingual students' family status does not affect their English language learning are not rejected and these relationships are independent. Three more hypotheses (5, 6, and 7) are left to be tested later in the paper.

Transformation of variables to test weighted sums

The 'Transform' function in IBM SPSS, version 26.0, was used to generate new variables representing sets of weighted variables to study their relationships with the chosen dependent variable that supports students' learning of a foreign language, in this case, the English language.

Hence, to transform the six-factor components (Table 15) into more condensed weighted sums, a second-factor analysis was run to extract loads of the weighted sums computed earlier in Table 15. The purpose is to combine the three components of the Towers Perrin's ISR Model for engagement (i.e., Weighted CT, Weighted AF, and Weighted BA) to a new Weighted Sum labeled 'Weighted Engagement,' and the other factors like Weighted PLPFAF and Weighted PLPEAE into the new variable 'Weighted Multilingualism', and the last three factors Weighted SLP, Weighted SFS, and Weighted PALI into a new variable labeled 'Weighted Family Influence.'

The second-factor analysis resulted from KMO and Bartlett's Test with a measure of $0.605 > 0.50$, considered low but acceptable to perform the factor analysis (Kaiser, 1974; Rožman, Shmeleva, & Tominc, 2019; Sürücü, Yıkılmaz, & Maslakçı, 2022), Bartlett's test of Sphericity (Approx. Chi-Square = 291.041, Sig. 0.000). Moreover, three components with a Total Variance Explained of 64.313% were defined, with component 1 (29.428%), component 2 (22.043%), and component 3 (12.842%). Varimax rotation (Principal Component Analysis, Varimax with Kaiser Normalization) resulted in component 1 with three items and loads (WeightedCT [0.924], WeightedAF [0.834], & WeightedBA [0.836]), component 2 with two items and loads (WeightedPLPFAF [0.740] and WeightedPLPEAE [0.785]), and the third component with three items and load (WeightedSLP [0.743], WeightedSFS [0.458], and WeightedPALI [0.503]).

Performing a new transformation using the below formulations results in three weighted sums representing three variables that may lead to a more concise relationship with the dependent variable, 'I like my English courses because I am aware of how these will improve my performance.'

WeightedEngagement=SUM(WeightedCT*0.924,WeightedAF*0.834,WeightedBA*0.836).

Grouping the three engagement components.

WeightedMultilingualism=SUM(WeightedPLPFAF*0.740,WeightedPLPEAE*0.785).

Grouping WeightedPLPEAE: Parents' proficiency in English, Arabic/English, English, Arabic, French, and WeightedPLPFAF: Parents' proficiency in French, Arabic/French, French, Arabic, English under Multilingualism.

WeightedFamilyInfluence=SUM(WeightedSLP*0.743,WeightedSFS*0.458,WeightedPALI*0.503).

Grouping WeightedSLP: Students' language proficiency, WeightedSFS: Students' family status, and WeightedPALI: Parents' Arabic language influence.

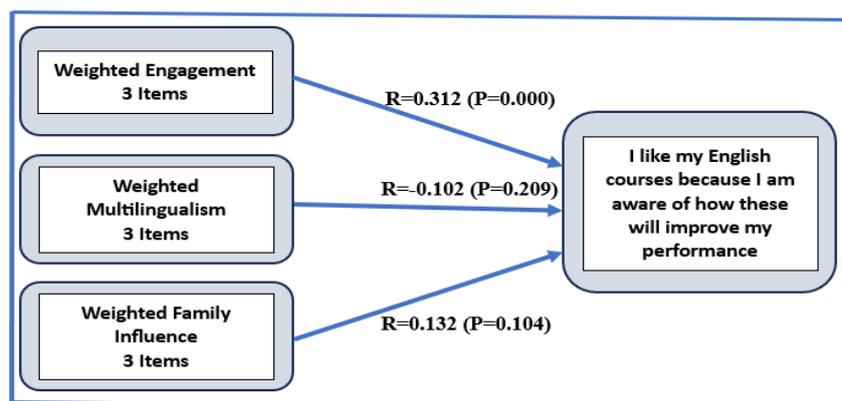


Figure 5. Tested Conceptual Model

Running a Pearson’s correlation analysis between the resultant new variables: Engagement, parents’ multilingualism, and family influence versus the dependent variable, ‘I like my English courses because I am aware of how these will improve my performance’ shows that only the engagement variable is the statistically valid independent variable ($R=0.312$, $P=0.000 < \alpha=0.05$). However, this does not end the overall testing since other non-scale variables were not counted in the initial factor analysis exercise and could be candidates for the explanation of the dependent variable. Therefore, the next step is to run a regression analysis. From the results, testing of the remaining hypotheses results and a final conceptual model will be proposed to guide and correcting the initial assumptions (Figures 4 and 5).

Regression

The regression model’s results, after six (6) cycles of calculations (Table 17), show that the coefficients of correlation ($R = 0.563$) and determination ($Adj. R^2 = 0.288$), respectively, the resultant regression line can fit the available data. However, the model is also appropriate qualitatively, with a significant probability of 0.017 ($p < \alpha = 0.05$). The Durbin-Watson statistic for this case is 1.957, a value between 0 and 4. A value near 2.0 means no detection of autocorrelation in the sample (Al Sayed et al., 2022). The ANOVA test in Table 18 yielded an F-value of 11.186 (Sig P. = 0.000 < $\alpha = 5\%$), indicating that the resulting regression equation outperforms a random prediction. Furthermore, every standardized beta (Table 19) has a statistically significant value where the first six variables are statistically significant at a 5% confidence level, and the last two variables are statistically significant at a 10% confidence level (Sig. = 0.005, 0.000, 0.003, 0.005, 0.007, and 0.017; 0.087 and 0.051). Furthermore, Table 19’s Variance Inflation Factors (VIFs) indicate that there is no multicollinearity ($VIFs < 4$). Each of the explanatory variables, may be counted-for to use regression and establish a causal association (Hashem et al., 2022). According to this revised model, the explanatory factors account for 28.8% of the variation in the dependent variable. Moreover, Figures 6 and 7 illustrate the model’s appropriate normalcy. Regarding the recently proposed study paradigm, this new result is shown in Figure 8.

Table 17: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
6	.563 ^f	.316	.288	.699	.028	5.876	1	145	.017	1.957

f. Predictors: (Constant), WeightedEngagement, Being Proficient in English Improves Future Job Opportunities, Education - Father, Teachers Use an Attractive Teaching Style in My English Courses, Speaking in English Gives Me a Sense of Achievement, Satisfied with English Courses at University

g. Dependent Variable: Like English Courses Because of Being Aware These Will Improve Performance

Table 18: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
6	Regression	32.833	6	5.472	11.186	.000 ^g
	Residual	70.931	145	.489		
	Total	103.763	151			

a. Dependent Variable: Like English Courses Because of Being Aware These Will Improve Performance

g. Predictors: (Constant), WeightedEngagement, Being Proficient in English Improves Future Job Opportunities, Education - Father, Teachers Use an Attractive Teaching Style in My English Courses, Speaking in English Gives Me a Sense of Achievement, Satisfied with English Courses at University

Table 19: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
6	(Constant)	2.349	.577	-	4.069	.000	-	-
	WeightedEngagement	.050	.017	.211	2.870	.005	.874	1.144
	Being Proficient in English Improves Future Job Opportunities	-.425	.098	-.309	-4.349	.000	.931	1.074
	Education - Father	-.097	.032	-.211	-3.012	.003	.964	1.038
	Teachers Use an Attractive Teaching Style in My English Courses	.212	.075	.198	2.822	.005	.956	1.046
	Speaking in English Gives Me a Sense of Achievement	.159	.058	.202	2.737	.007	.865	1.156
	Satisfied with English Courses at the University	.152	.063	.171	2.424	.017	.946	1.057
	Reading Translation when Watching Foreign Films	-	-	-.125	-1.723	.087	.880	1.137
	Parents Read to Me in English at a Young Age	-	-	.140	1.970	.051	.910	1.099

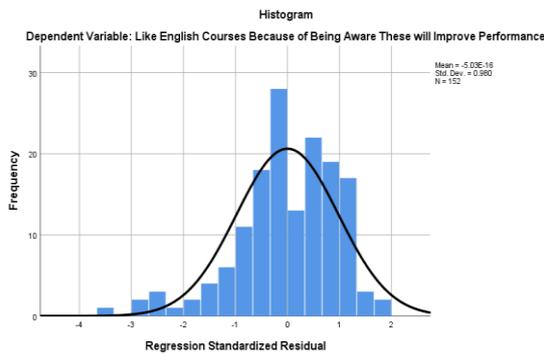


Figure 6. Histogram

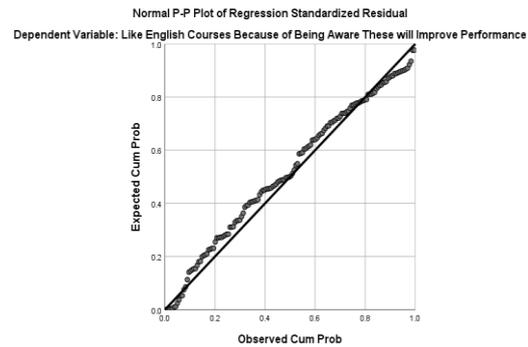


Figure 7. Normal P-P Plot

Results from Table 19 help test the remaining hypotheses 5, 6, and 7 as follows:

The explanatory variable “Satisfied with English Courses at the University” has a direct, positive, and statistically significant ($\beta=.171$, $t=2.424$, and $p=.017<0.05$) relationship with the dependent variable “Like English Courses Because of Being Aware These Will Improve Performance” which satisfies the alternative hypothesis H_{a5} : Universities’ role in teaching language skills in English does affect their students’ English language learning.

The explanatory variable “Teachers Use an Attractive Teaching Style in My English Courses” has a direct, positive, and statistically significant ($\beta=.198$, $t=2.822$, and $p=.005<0.05$) relationship with the dependent variable “Like English Courses Because of Being Aware These Will Improve Performance” which satisfies the alternative hypothesis H_{a6} : Instructors’ role in teaching language skills in English does affect their students’ English language learning.

The explanatory variables “Reading Translation when Watching Foreign Films”, “Speaking in English Gives Me a Sense of Achievement”, and “Being Proficient in English Improves Future Job Opportunities” represent hypothesis 7 on the dimension of self-improvement. These three variables’ relationships with the dependent variable are statistically significant with two indirect relationships (negative Betas) and one direct (positive Beta), but supporting the seventh alternative hypothesis, H_{a7} : Students’ self-improvement role does affect their students’ English language learning.

The resultant qualitatively-significant regression model is as follows:

I Like my English Courses Because I am Aware of How These Will Improve My Performance =

+ (0.211) (WeightedEngagement) – (0.309) (Being Proficient in English Improves Future Job Opportunities) - (0.211) (Education – Father) + (0.198) (Teachers Use an Attractive Teaching Style in My English Courses) + (0.202) (Speaking in English Gives Me a Sense of Achievement) + (0.171) (Satisfied with English Courses at the University) – (0.125) (Reading Translation when Watching Foreign Films) + (0.140) (Parents Read to Me in English at a Young Age).

In graphical form, the tested conceptual framework is depicted in Figure 8.

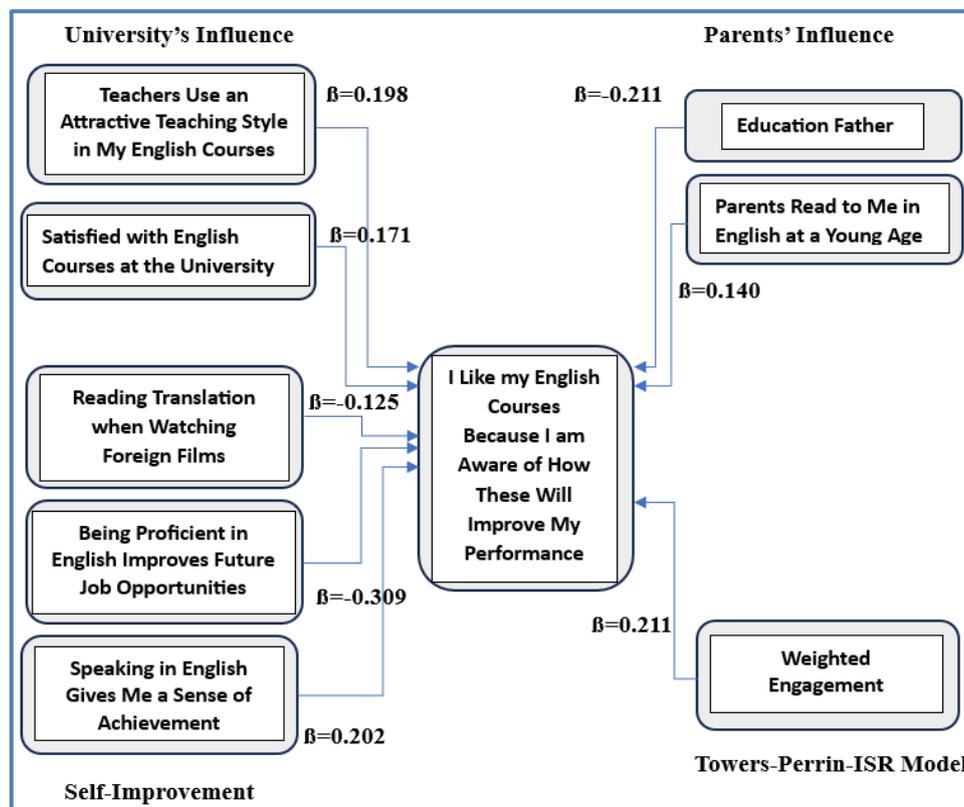


Figure 8. Statistically Significant Modified Conceptual Framework

Discussion

According to the results, and considering the qualitative meaning of the resultant regression model, the first element being students' engagement which has a positive influence, we find that Towers-Perrin's ISR Model is presented in the explanatory variable "Weighted Engagement" which shows that the mixed effect of cognitive thinking, affective feeling, and behavioral acting theories (Haddock and Huskinson, 2004; Kotni, 2011, p.32; Towers Perrin, 2015, p. 5) leads to an enhancement in their engagement and becomes a determinant of students' awareness of how their English courses impact their performance. Earlier in this paper, the authors contend that students' engagement is 'students' academic engagement and ability to contribute to English courses' success' that leads to motivation towards better performance. From the quantitative aspect, cognitive thinking attracted students' agreement with 85.32% (mean of 3.19 and a standard deviation of 0.725), affective feeling attracted students' agreement with 89.74% (mean of 3.35 and a standard deviation of 0.662), and behavioral acting attracted students' agreement with 89.06% (mean of 3.29 and standard deviation of 0.676). Overall, students see a fit between their needs and their English courses, feel a sense of belonging to their English language classes, enjoy them, feel satisfied with their English grades, are willing to do more than required, and are committed to completing their courses with the best effort in their assignments and examinations. The observed motivational aspects affecting their performance positively are in line with other researchers'

findings (Kusurkar, Ten Cate, Vos, et al., 2013; Wigfield, Tonks, & Klauda, 2016; Steinmayr, Weidinger, Schwinger, et al., 2019). The framework also supports the students' efforts for self-improvement based on their attitude towards English. The first shows a negative sign reflecting that 87.50% read foreign movies' subtitles in Arabic while only 12.40% do not, therefore, even though that may influence their performance to a low extent (Beta of 0.125) because according to Dr. Sara Eid, Head of the unit responsible for remedial English courses offered to new university students at Al Maaref University (personal communication by the first author, October 20, 2023), students need to get acquainted with English speaking films but using English subtitles that accompany the different film dialogues for better improvement of their listening and reading skills. The second variable, "Being Proficient in English Improves Future Job Opportunities," has a low negative coefficient that reflects its negative effect on the dependent variable. This is reasoned by stating that students understand that the language of business is English; therefore, 98% of them agreed that it affects their opportunities for future jobs even though, at the same time, they are aware of the harsh financial and economic conditions of the country and their impact on the job market, hence having such a mixed position affects the students' performance that capitalizes on liking the English language courses. The third variable, "Speaking in English Gives Me a Sense of Achievement," with a student agreement level of 82.30%, expresses strong motivation that supports the influence of this variable positively on the dependent variable. Chehimi's (2021) research findings attested to this variable. The next dimension of the framework is the university's influence on students. Two variables are salient here. The first is "Teachers Use an Attractive Teaching Style in My English Courses," with an agreement level of 92.80%. This variable has a direct positive effect on the dependent variable and is considered a significant factor for students to like their English classes (Baran-Lucarz & Klimas, 2020; Chehimi & Alameddine, 2022). The second variable "Satisfied with English Courses at the University," with a student agreement level of 86.90%, is also positively and directly affecting the dependent variable. From an overall view of these two variables, when a university has the appropriate instructors and a positive classroom environment, students will no doubt like their English courses, and such a positive outcome is also a significant motivator to improve performance. This type of educational environment and having students who like their English education will foster their preparation for the 21st-century requirements. Seargeant and Erling (2011) posit that "Proficiency in English is a vital element in the skill-set necessary for successful participation in 21st-century society" (p. 248). Finally, the last dimension is the parents' influence with two salient variables. The first is the fathers' education variable with a negative sign. The negative sign signifies that overall, the fathers' education was more inclined towards high school or lower with 37.9% earning a bachelor's degree or higher. Nevertheless, the fathers' education is important, even with the indicated levels, for the habit of reading to their children at a young age. Fathers (49%) read to their kids using multilingual readings (Arabic, English, French, and others) and knowing that fathers are characterized as 19.6% bilingual (Arabic and English) and as 14.4% trilingual (Arabic, English, and French). With such information, the fathers' education affects the students' liking of their English courses. The second variable, "My Parents Read to Me in English at a Young Age," positively affects the dependent variable. The facts just discussed

and related to the fathers are coupled with the mothers' characteristics. The sample shows 66.7% of the mothers read using multilingual readings (Arabic, English, French, and others), they are 19.70% bilingual (Arabic and English), and 11.20% trilingual (Arabic, English, and French). Therefore, considering that both parents read to their children at a young age, there is no doubt that they implanted the habit of reading in their kids. That is a positive motivator to like a foreign language (English in this case) at a higher age. Younes, Salloum, and Antoun (2023) assert that influencing factors at home that affect children's performance are "language, parents' education level, number of books owned, and parents' involvement among others" (p. 1). Also, Hayek et al. (2021) posit that "Parents are a significant source of influence, making them crucial intervention targets" (p. 101). Therefore, this variable supports, in part, the bilingual (Arabic and English) influence on the students' liking of their English courses and being aware of their performance improvement. The literature has demonstrated that early reading instruction fosters healthy reading habits (Leppänen, Aunola, & Nurmi, 2005; A. Hejase et al., 2019; H. Hejase et al., 2020). Nevertheless, studies in later educational stages show that students give up reading time to spend more time online (mean 2.47 hours with a standard deviation of 1.5 hours) and watching television (mean 1.93 hours with a standard deviation of 1.21 hours) (Mokhtari, Reichard, & Gardner, 2009).

Conclusion

This paper tested nine hypotheses. The initial testing of six hypotheses resulted in accepting one only. According to the findings of this first test, there is a statistically significant correlation between students' engagement and their positive attitude toward learning a foreign language in this study of English. Using Towers Perrin's ISR Model proved to be suitable, however, in a combined form of the three dimensions: Cognitive thinking, affective feeling, and behavioral acting. Such a combination is encouraged by other studies (Haddock and Huskinson, 2004; Kotni, 2011, p.32; Towers Perrin, 2015, p. 5). All three determinants of students' engagement were statistically significant separately or combined. The outcome emphasizes how crucial it is to have universities with well-established governance (cognitive thinking), well-executed pedagogical strategies (affective feeling), and respect for human capital and its future potential (behavioral acting).

The study survey results indicate through descriptive statistics that there is a specific relationship between students' learning of the English language and the following:

- Cognitive Thinking:

I understand how my efforts contribute to the course goals (93.40% agreement by students)

I find that my values and the organization's values are similar (83.60%)

I see a fit between my needs and my English courses (82.90%)

- Affective Feeling:

Feeling Satisfied with the Teaching Provided by Instructors (94.70%)

Enjoying My English Classes (84.20%)

Satisfied with Grades Gotten in English Classes (78.30%)

Feeling Respected by Peers and Teachers (97.40%)

- Behavioral Acting
 - Currently Willing to Continue in English Courses (95.40%)
 - Do What Represents My Beliefs and Feelings in the Classroom (86.80%)
 - Seek to Have an Impact on the English Courses' Success (90.10%)
 - Committed to Giving My Best at Assignments and Exams (93.40%)

Raza et al. (2020) posit that "appreciative leadership positively enhances workplace belongingness" (p. 436). That is observed by the "Teachers Use an Attractive Teaching Style in My English Courses," with an agreement level of 92.80%. That has a positive impact on the students and their attitude toward learning English and improving their performance in their English classes (Baran-Lucarz & Klimas, 2020; Chehimi & Alameddine, 2022). The second variable, "Satisfied with English Courses at the University," is enforced with a student agreement level of 86.90%. Such an environment at universities improves the instruction results, which increases student commitment to improve themselves and their institutions as shown in the self-improvement results of the regression model.

Regarding the research's limitations, the following were noted: It was challenging to obtain a sufficient number of responses (153 from a few universities). Most likely, due to the stringent university rules to allow the distribution of surveys on campus. It was difficult to visit many institutions across different regions in person and distribute the survey on paper due to the socioeconomic crisis conditions in Lebanon. Consequently, the findings of this research may not be generalizable; nevertheless, beneficial to shed light on the significant aspect of students' foreign language learning and the possible determinants of such learning.

Recommendations

The study's conclusions led to the following recommendations for university decision-makers in the English departments, faculty members, and part-time instructors, particularly those at Lebanon's universities:

1. Upgrading English teaching pedagogies for better effectiveness (Shaaban and Ghaith, 1999; Al-Maarooqi and Denman, 2015; Shaaban, 2017; Mustafawi and Shaaban, 2018; Wang, 2020; Wang, 2022).
2. Upgrading EFL and ELT English curricula (Hollweck and Doucet, 2020; Ichim, 2022; Rizwan and Rumana, 2022).
3. Providing hybrid training to staff members, especially those teaching English as a Foreign Language (EFL) roles in Lebanon's universities. Such training must include active, dynamic, motivated, and innovative teaching styles. When teaching English as a second language or as a foreign language, teachers' professional development has a significant impact (Shaaban, 2017; Hashash et al., 2018, p. 2; Hollweck and Doucet, 2020).
4. Offering various hybrid training programs following instructors' learning preferences and attitudes or personalized learning. Cetina (2007) posits that "Participants in the research got detailed training in ELT methodology, pedagogy, and computer-assisted language learning (CALL) throughout a 12-week pilot program." (p. 260). In addition, Cetina called for "swift adoption of "tailor-made teacher training programs" to give the "emergent" EFL teachers—especially those in isolated and rural areas—immediate, workable, and effective

- training and teaching.” (ibid).
5. Teaching staff members must be provided with all the information, tools, and assistance they need to complete the required enthusiastic teaching during the process (Faulkner and Latham, 2016; Hashash et al., 2018; Chehimi and Alameddine, 2022). In addition, HEIs and other teaching institutions need to be ready to adopt and adapt to the newest Metaverse technologies that offer new immersive and personalized learning capitalizing on Artificial Intelligence flexible training methods (Huynh-The, Pham, X-Q., Nguyen, et al., 2023; Rammal, Hejase, & Hazimeh, 2023; Hajjami and Park, 2023).
 6. Making the most of the instructors' positive attitudes and commitment to lifelong learning to promote a culture of knowledge acquisition and sharing in conjunction with higher education institutions (Hollweck and Doucet, 2020; Chehimi and Alameddine, 2022).
 7. To promote harmony between EFL teaching members and university goals, persons in charge must comprehend the institution's culture, mission, and values (Kumar, 2023).
 8. Senior university management must respectfully and transparently link the EFL teaching staff training outcomes to the university's success and objectives (The City University of New York, 2024).

Future Research

This study closes gaps linking students' learning and EFL instructors to university commitment to teaching policies by enlightening other higher education institutions, English instructors, professional EFL trainers, and researchers. Strengthening the relationship between students and their instructors and departmental chairpersons, appreciating and recognizing teachers' or instructors' innovations, and fostering both students and their instructors' loyalty are all aspects of future research processes that incorporate HEIs efforts to ensure that instructors are motivated and prepared to offer their best efforts to foster better EFL learning and more innovative teaching techniques.

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Ethics approval

The Publication Ethics Committee of the Macrothink Institute.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

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