Pak. j. life soc. Sci. (2024), 22(2):16014-16034 E-ISSN: 2221-7630;P-ISSN: 1727-4915

Pakistan Journal of Life and Social Sciences
www.pjlss.edu.pk

https://doi.org/10.57239/PJLSS-2024-22.2.001161

RESEARCH ARTICLE

Exploring the Factors Affecting Academic Performance: A Path Analysis of English Proficiency, Code Switching and Code Mixing Among TARUMT Students

Ting Tin Tin[1], Wong Yi Cheng[2], Yap Tee Jin[3], Chaw Jun Kit[4], Wan Nor Al-Ashekin Wan Husin[5], Ali Aitizaz[6], Lee Kuok Tiung[7*], Ayodeji Olalekan Salau[8a,8b] , Umar Farooq Khattak[9], Yasin Ahmed Siddiqui[10]

[1,5,7]Faculty of Data Science and Information Technology, INTI International University, Nilai 71800, Malaysia
[2,3]Faculty of Computing and Information Technology, Tunku Abdul Rahman University of Management and Technology, Kuala Lumpur, Malaysia
[4]Institute of Visual Informatics, Universiti Kebangsaan Malaysia, Bangi 43600, Malaysia
[6]School of technology, Asia Pacific University, Malaysia
[7]Faculty of Social Science and Humanities, 88400 Kota Kinabalu, Universiti Malaysia Sabah, Malaysia
[8a]Department of Electrical/Electronics and Computer Engineering, Afe Babalola University, Ado-Ekiti, Nigeria
[8b]Saveetha School of Engineering, Saveetha Institute of Medical and Technical Sciences, Chennai, Tamil Nadu, India
[9]School of IT, Unitar International University, Malaysia
[10]School of Business, Asia Pacific University, Malaysia

ARTICLE INFO

Received: Sep 2, 2024

Accepted: Oct 17, 2024

Keywords

Education
English Language Proficiency
Parental Involvement
Personality Traits
Code Switching

***Corresponding Author**

tintin.ting@newinti.edu.my

ABSTRACT

Addressing the gap between potential and achievement in Malaysia's education system is important for the nation's development. Despite Malaysia's progress as a developing country, Malaysia continues to face challenges in education. In comparison to other developing countries, it is apparent that Malaysia lags behind international averages. This study seeks to understand the various factors (parental involvement, self-esteem, level of introversion and level of extroversion) influencing TARUMT students' academic performance, focusing particularly on the mediating roles of English language proficiency, code switching and code mixing. An online questionnaire was utilized to gather data from TARUMT students and a total of 100 responses were collected. Cronbach's alpha was used to measure the questionnaire items' reliability, whereas Pearson correlation and path analysis model was used in data analysis. The results suggested that there is a significant positive effect of parental involvement on English language proficiency. However, English proficiency did not mediate the relationships between parental involvement and code switching or code mixing, nor did it significantly affect overall academic performance. Similarly, no significant effects were found between self-esteem, introversion and extroversion on English proficiency or academic achievements. Moreover, English proficiency, code switching or code mixing showed no significant mediating effect on self-esteem, personality traits (level of introversion and level of extroversion) and academic performance. The study suggests that while parental involvement enhances English skills, it does not translate into academic achievement. These findings offer insights for policymakers aiming to reform Malaysia's education system in efforts to address its stagnation.

INTRODUCTION

The quality of an education system significantly impacts both individual student success and national growth. Despite Malaysia's development status, its students' performance in OECD assessments is below average, with scores in science, mathematics, and reading at 416, 409 and 388 respectively, compared to the OECD averages of 485, 472 and 476 (OECD, 2023). This disparity highlights the urgent need for educational reformations. While there is a bias towards fully developed OECD countries when compared to a developing nation like Malaysia, it should not be a deterrent for our country to pursue a better education system as a good education system is particularly beneficial in the long run for the nation's development.

Previous studies found that personality traits, ranging from introverted to extroverted, can significantly influence students' learning processes. For instance, introverted students often engage more in solitary learning activities, which may lead to higher English proficiency scores compared to their extroverted peers who thrive in social settings (Noviana & Oktaviani, 2022). The difference in personality could influence student's motivation to study and time management which inadvertently affects their academic performance. Noviana and Oktaviani (2022) conducted a research among 44 students in the Universitas Teknokrat Indonesia and yielded results that points out students associated with higher introversion level tend to achieve higher results in the English Proficiency Ability (EPT) scores compared to extroverted students and linked this to the conclusion that states introverted students are more likely to engross themselves in reading and learning activities to compensate their inability to comprehend certain concepts compared to extroverted students.

Besides their personality, a student's self-esteem is another crucial factor that contributes to the level of academic progression a student can potentially achieve. Self-esteem, or more commonly referred to as self-confidence, is an important aspect of a student that governs the way a student views themselves and forms opinions regarding their self-worth based on the values and attributes they possess. This directly affects a student's ability to express themselves to their fullest potential which, if the self-esteem of the student is low, could mentally inhibit student's character development especially in academics. In China, Yu et al. (2022) carried out a study to investigate the correlation between self-esteem and academic performance among youths in 30 primary and secondary schools with a sample size of 3101 students, which revealed a high positive correlation between the self-esteem and academic results of students (Yu et al., 2022).

From another angle, it is irrefutable that parents as a role model will have a significant impact in shaping their children into well-rounded individuals. Parents' involvement in a student's life can mold the mindset of the student depending on their approach in raising them. With that said, parents' involvement towards their children's academic life will directly affect their academic performance. However, the phrase parental involvement has a diverse meaning and can be interpreted distinctly by different people and therefore should be broken down into more specific subsets that clearly defines the aspect of which parents can contribute to student's development as shown by a study conducted by Tan et al. (2020). In their research, they divided parental involvement into six categories which include managing expectation towards their children's academic progress, provide resource and support for children, frequency of discussion related to school with children, involvement in children's school activities, engage learning activities with children, and the degree of accentuation towards education (Tan et al., 2020). Their investigation revealed that for all the categories of parental involvement, they showed positive correlation towards student's academic performance, indicating that parents can have a significantly positive influence on their children's success in the academic aspect.

Although numerous studies have proved that factors such as parental involvement, student's self-esteem and their personality have correlation towards student's academic performance, it is still unclear how students' academic performance are affected. For instance, a student's self-esteem and personality are abstract qualities that are not easy to analyze and that can possibly decrease the accuracy of produced results when used in research. Therefore, mediating factors of

quantitative nature that can connect to these mentioned qualitative attributes are introduced to gain better insights regarding the issue. For this research, the English language proficiency, code mixing and code switching will be the mediating factors for the student's academic performance. This research aims to aid policymakers in enhancing Malaysia's education system in efforts to address its stagnation.

2.0 LITERATURE REVIEW

Self-Esteem and English Proficiency

Self-esteem's subtle yet profound influence on language acquisition, particularly in the context of English proficiency, remains a topic of increasing interest among researchers. Hashim et al. (2020) studied this relationship, emphasizing the pivotal role of self-esteem in determining English language proficiency levels. Their study highlighted how learners with diminished self-esteem often encounter formidable obstacles in mastering the English language, not solely due to academic challenges, but also stemming from psychological barriers such as speaking anxiety and feelings of inadequacy in comparison to their more proficient peers. Expanding upon these insights, both parties, Gultom and Oktaviani (2022), Utami and Wahyuddin (2022), investigated the correlation between students' self-esteem and their performance on English proficiency assessments. Their findings hinted at a significant relationship between self-esteem levels and language proficiency. Furthermore, Haidar et al. (2020) further contributed to this discussion by analyzing self-esteem in oral English language proficiency among secondary school students. The study not only affirmed the profound impact of self-esteem on speaking skills but also shed light on gender-based variations in self-esteem, albeit marginally. It also highlighted the role of internal motivation and interpersonal interaction in language learning. Moreover, Zare et al. (2023) adopted a unique perspective by examining the effects of altruistic teaching on emotion regulation and English language proficiency. Their research revealed a symbiotic relationship between altruistic teaching methods, learners' self-esteem and their English proficiency levels, highlighting the potential of incorporating altruistic teaching practices into language teaching strategies. These findings are further supported by many other researchers in secondary and tertiary education (Noorollahi, 2021; Skripsiani et al., 2022).

English Proficiency and Academic Performance

English stands as one of the most influential languages in today's globalized world, serving as a bridge that interconnects people from diverse cultural backgrounds worldwide. Numerous studies have looked into this topic to affirm their stance on the relationship between English proficiency and academic performance. Gheyathaldin and Shishakly (2020) found that English proficiency heavily influences academic performance. Their study, which involved a diverse group of business students, revealed that those with higher English proficiency scores tend to have better academic performances. Similarly, Alrasheed et al. (2021) conducted an identical study on software engineering students. They found a moderate positive correlation between English proficiency and academic performance in software engineering. Notably, their study also highlighted the limited influence of academic background on academic performance. This suggests that English proficiency may play a more critical role than academic background in determining academic success in certain contexts. Moreover, Wang et al. (2023) explored the correlations among international accounting students' English language proficiency, accounting knowledge and academic performance in a transnational education program. Their findings not only affirmed the significant relationship between English proficiency and academic achievement but also highlighted the role of prior accounting knowledge in shaping academic success. Additionally, Oducado et al. (2020) contributed insights from the field of nursing. Their research has shown the profound impact of English language proficiency on students' performance in professional nursing courses and licensure examinations. Their study, involving nursing students in the Philippines, has made it apparent that there is a strong correlation between English proficiency and academic performance. Further evidence into this relationship is provided by Mohamad et al. (2020), who conducted research on the predictive validity of the English Exit Test

(EET) and academic achievements. Their study uncovered a positive correlation between students' EET results and their Cumulative Grade Point Average (CGPA), indicating that the EET can predict students' academic achievement. This suggests that English proficiency, as measured by the EET, can distinguish proficient students from less proficient ones in terms of academic success. These findings collectively highlight the significant role of English proficiency in determining academic success across diverse academic disciplines and emphasize the importance of fostering English language skills for students in various educational contexts.

Parental Involvement and English Proficiency

Parents are shouldered with the responsibility of caring for their child and their involvement in children's life will affect their skillset and value they have, including their English skill level. In this context, parental involvement refers to the parent's ability to provide sufficient academic resources, direct aid and support in children's academic progress, shaping their attitude and behavior towards education and English language. Several research has shown that parents that are actively involved in a children's journey in English learning can see a better result in terms of children's English academic result, communication skill and fluency (Barger et al., 2019; Dong et al., 2020; Hosseinpour et al., 2015; Yeoh, 2021). An example of said research is conducted by Yeoh (2021) where a surveying technique investigating the degree of parental involvement was implemented with 123 students as participants and the result highlights most students that felt a greater sense of involvement coming from their parents towards their education scored better results in their academic tests. Therefore, it is utmost important that parents actively involve themselves in the education aspect of children's life while they are still young to nurture a habit of always wanting to learn as a study showed that parents that are actively involved in children's academic progress can also increase their children's motivation to learn (Wang et al., 2023) which in turn will also indirectly affect their English proficiency positively. This effect is explained by Wang et al. (2023), believing that students need some form of incentive in order to maximize their learning engagement such as rewards and praise for achieving high marks for the examinations. Furthermore, direct involvement, parent's language choice of communication and resource provided at home can affect student's English comprehension skill in which another study was conducted to investigate the relationship between the environment of home and student's English academic performance and the result yielded a positive correlation (Dong et al., 2020) meaning that an English-rich environment with ample literature resources can improves student's English proficiency. Besides, another research has shown that nowadays, employers are keener to hire undergraduates that have a high English proficiency (Nesaratnam et al., 2020) which can be tested by interviews or academic results, with the reason being a higher English proficiency means better communication skill, efficiency and productivity in the workplace. Parents that understand this will therefore emphasize on children's English proficiency skill to prepare them for their future career prospects.

Code Switching, Code Mixing and Academic Performance

Code mixing means the implementation of words or phrases from a different language in a sentence during communication whereas code switching means changing the language of communication as a whole mid conversation. It is inevitable that there will be a high usage of code mixing and code switching with the diverse race and culture in Malaysia that are affecting a student's choice of language communication. This is proven in a study where two researchers conducted an experiment on the frequency of code switching and code mixing between Malay and English by observing 20 volunteers having a conversation for 240 minutes and the result showed that 4 out of 5 times, the participants used code switching and code mixing (Sumartono & Tan, 2018). In this research, we want to find out how code switching and code mixing affects academic performance. Numerous research regarding the effects of code switching and code mixing towards student's academic performance has been done and there are contradicting conclusions among them. Firstly, a few studies have shown that code switching and code mixing indirectly affects academic performance positively (Ezeh et al., 2022; Nawaz et al., 2023; Odhiambo, 2021; Tin et al., 2024) with the reasons being students are able to understand teachers better when

teachers employ code switching and code mixing to explain the study material. However, some research has also shown that code switching and code mixing negatively affects student's academic progress and impedes their language learning ability (Jabeen et al., 2023; Nawaz et al., 2023). Their conclusions revealed that code switching and code mixing made language harder to understand and impeded student's language skill and their ability to learn as they grew more reliant on code switching and code mixing. As shown from the aforementioned research, plenty of studies have showcased the effect of code mixing and switching towards language learning ability and a coherent conclusion still cannot be formed. Therefore, further research needs to be done in this gray area to investigate how code switching and code mixing can affect students academically .

Table 1: Covariates of English Proficiency and Academic Performance on Previous Studies

Covariate	Detail Variable	Previous Studies
Parental Involvement	Parent's involvement towards children's school events and academic performance.	**(Barger et al., 2019)**
	Parent's influence on the home literacy environment and the effect towards children's academic results.	**(Dong et al., 2020)**
	Parent's involvement and attitude towards English learning programs and the effect towards English academic results.	**(Hosseinpour et al., 2015)**
	Parental involvement from parents and students perspective and the mediating factor of learning engagement between parental involvement and student's academic performance.	**(Wang et al., 2023)**
	Parental involvement and its effect on children's English skill level.	**(Yeoh, 2021)**
Self-esteem	Student's self esteem and the effect it has on their English academic result.	**(Gultom & Oktaviani, 2022)**
	Student's self-esteem and how it affects their English proficiency in oral skills.	**(Haidar et al., 2020)**
	Relationship between student's self-esteem, self-efficacy and academic performance.	**(Noorollahi, 2021)**
	Correlation between student's self-esteem, strategy of learning and English performance.	**(Skripsiani et al., 2022)**
	Student's self-esteem and its influence on their English proficiency test result.	**(Utami & Wahyudin, 2022)**
Level of	The correlation between a student's	**(Noviana et al., 2022)**

Introversion and Extroversion	personality and their English proficiency.	
	Student's introvert and extrovert personality and its effect on their academic performance.	**(Paradilla et al., 2020)**
English Proficiency	The effect of english proficiency skill towards software engineer student's academic performance	**(Alrasheed et al., 2021)**
	Student's English Proficiency Test (EPT) score and the relationship with their academic performance	**(Azkiyah et al., 2023)**
	The effect of english proficiency skill towards business student's academic performance	**(Gheyathaldin & Shishakly, 2020)**
	The lack of english proficiency among military cadets	**(Hashim et al., 2020)**
	The predictability of student's academic achievement through the use of English Exit Test performance result	**(Mohamad et al., 2020)**
	The effect of english proficiency skill towards nurse student's academic performance	**(Oducado et al., 2020)**
	The relationship between english language proficiency, accounting knowledge and academic performance among students in China	**(Wang et al., 2023)**
	The effect of english learning towards student's self esteem, self efficacy and academic performance in Iran	**(Noorollahi, 2021)**
	The effect of altruism teaching towards student's emotion and english writing skill	**(Zare et al., 2023)**
Code Mixing and Code Switching	The problems of code mixing and code switching towards student's english learning progress	**(Jabeen et al., 2023)**
	The benefit of code switching in student's academic performance	**(Nawaz et al., 2023)**
	The effect of code mixing and code switching towards student's english language skill	**(Odhiambo, 2021)**

Conceptual Framework

Figure 1 shows the conceptual framework developed according to past research with the addition of mediating factors, English proficiency, code switching and code mixing to address the research gap.

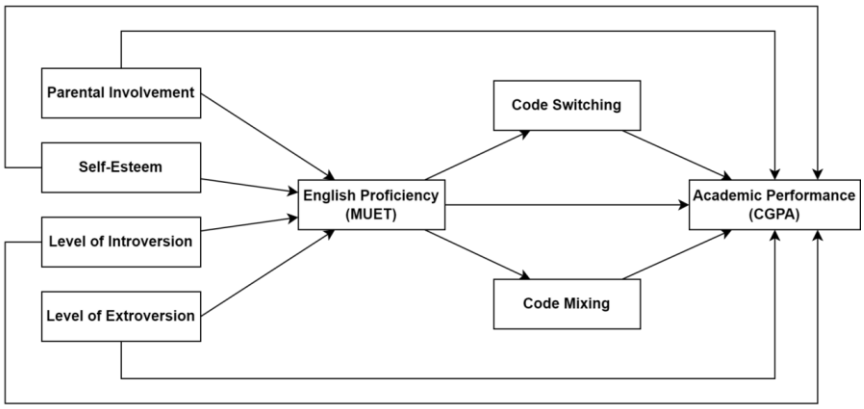

Figure 1. Conceptual Framework Table

H1 : There is a positive effect between parental involvement and English proficiency (MUET).

H2 : There is a positive effect between self-esteem and English proficiency (MUET).

H3 : There is a negative effect between level of introversion and English proficiency (MUET).

H4 : There is a positive effect between level of extroversion and English proficiency (MUET).

H5 : There is a positive effect between English proficiency (MUET) and code switching.

H6 : There is a positive effect between English proficiency (MUET) and code mixing.

H7 : There is a positive effect between parental involvement and academic performance (CGPA).

H8 : There is a positive effect between self-esteem and academic performance (CGPA).

H9 : There is a positive effect between level of introversion and academic performance (CGPA).

H10 : There is a positive effect between level of extroversion and academic performance (CGPA).

H11 : There is a positive effect between English proficiency (MUET) and academic performance (CGPA).

H12 : There is a positive effect between code switching and academic performance (CGPA).

H13 : There is a positive effect between code mixing and academic performance (CGPA).

H14 : There is a mediating effect of English proficiency (MUET) in the relationship between parental involvement and academic performance (CGPA).

H15 : There is a mediating effect of English proficiency (MUET) in the relationship between self-esteem and academic performance (CGPA).

H16 : There is a mediating effect of English proficiency (MUET) in the relationship between level of introversion and academic performance (CGPA).

H17 : There is a mediating effect of English proficiency (MUET) in the relationship between level of extroversion and academic performance (CGPA).

H18 : There is a mediating effect of English proficiency (MUET) in the relationship between parental involvement and code switching.

H19 : There is a mediating effect of English proficiency (MUET) in the relationship between self-esteem and code switching.

H20 : There is a mediating effect of English proficiency (MUET) in the relationship between level of introversion and code switching.

H21 : There is a mediating effect of English proficiency (MUET) in the relationship between level of extroversion and code switching.

H22 : There is a mediating effect of English proficiency (MUET) in the relationship between parental involvement and code mixing.

H23 : There is a mediating effect of English proficiency (MUET) in the relationship between self-esteem and code mixing.

H24 : There is a mediating effect of English proficiency (MUET) in the relationship between level of introversion and code mixing.

H25 : There is a mediating effect of English proficiency (MUET) in the relationship between level of extroversion and code mixing.

H26 : There is a mediating effect of code switching in the relationship between English proficiency (MUET) and academic performance (CGPA).

H27 : There is a mediating effect of code mixing in the relationship between English proficiency (MUET) and academic performance (CGPA).

H28 : There is a mediating effect of English proficiency (MUET) and code switching in the relationship between parental involvement and academic performance (CGPA).

H29 : There is a mediating effect of English proficiency (MUET) and code switching in the relationship between self-esteem and academic performance (CGPA).

H30 : There is a mediating effect of English proficiency (MUET) and code switching in the relationship between level of introversion and academic performance (CGPA).

H31 : There is a mediating effect of English proficiency (MUET) and code switching in the relationship between level of extroversion and academic performance (CGPA).

H32 : There is a mediating effect of English proficiency (MUET) and code mixing in the relationship between parental involvement and academic performance (CGPA).

H33 : There is a mediating effect of English proficiency (MUET) and code mixing in the relationship between self-esteem and academic performance (CGPA).

H34 : There is a mediating effect of English proficiency (MUET) and code mixing in the relationship between level of introversion and academic performance (CGPA).

H35 : There is a mediating effect of English proficiency (MUET) and code mixing in the relationship between level of extroversion and academic performance (CGPA).

3.0 RESEARCH METHODOLOGY

This study used questionnaires to gather data on factors affecting academic performance among the students of TARUMT. The population for this study consisted of students of TARUMT in Malaysia. It's important to note that while this population is diverse in terms of academic disciplines, age and socio-economic backgrounds, the findings of this study may not be generalizable to other groups of students or to undergraduates in other countries or universities. The sampling plan implemented was a combination of Simple Random Sampling and Convenience Sampling. This hybrid approach was adopted to ensure a diverse range of respondents. The convenience sampling method was particularly beneficial as it allowed for the leverage of social networks to distribute the questionnaire. Friends and acquaintances of the research team were asked to forward and spread the form, thereby increasing the reach of the survey. This strategy, while efficient, may introduce some bias as the sample may not fully represent the entirety of the student population in TARUMT. The questionnaire was designed using Google Forms and was distributed over a period of 4 weeks, starting on the 11th of March, 2024. The distribution

channels included various social media platforms which are WhatsApp, Instagram and email. The questionnaire was divided into 7 sections, with a total of 60 items as shown in Table 2.

Table 2: Questionnaire Items

Parental Involvement (Santos et al., 2022)	Q1. My parents ask me about homework regularly. Q2. My parents help me with homework. Q3. My parents discuss with me about my school days. Q4. I talk with my parents about my teachers often. Q5. My parents provide time to study at home. Q6. My parents emphasize academic more than extracurricular activities Q7. My parents regularly check my exercise books. Q8. My parents encourage me to work harder in school. Q9. My parents provide me with learning materials such as exercise books, pens, pencils, and text books. Q10. My parents always check on my academic progress in school.
Self-Esteem (Gultom & Oktaviani, 2022)	Q1. I can follow the lessons easily. Q2. I daydream a lot in class. Q3. I am able to help my classmates with their assignments. Q4. I often do my assignments without thinking. Q5. I pay attention to the lecturer during lessons. Q6. Most of my classmates are smarter than I am. Q7. I study hard for my tests. Q8. My lecturer feels that I am poor in my work. Q9. I am usually interested in my assignment. Q10. I often forget what I have learned. Q11. I am willing to do my best to pass all the subjects. Q12. I get frightened when I am asked a question by the lecturers. Q13. I often feel like quitting university. Q14. I am good at most of my subjects. Q15. I am always waiting for the lessons to end. Q16. I always do poorly on tests. Q17. I do not give up easily when I am faced with a difficult question in my assignment. Q18. I am able to do better than my friends in most subjects. Q19. I am not willing to put more effort into my assignment.
Level of Introversion (Noviana & Oktaviani, 2022)	Q1. I get tired after a long discussion in class. Q2. I am calm in class. Q3. My voice is quiet in class. Q4. I work best alone in class. Q5. I find it difficult to speak loudly in class. Q6. I listen more than I talk in class. Q7. I need quiet time alone after a class with lots of talking. Q8. I don't like speaking in front of the whole class in class. Q9. I enjoy working by myself in class. Q10. I would rather listen to my classmates' speeches instead of giving one myself. Q11. I would rather hear someone else's opinion than share my own in class. Q12. After class, I like to go home and be by myself.
Level of Extroversio	Q1. I am bored with individual work in class. Q2. I have a lot of energy in class.

n (Noviana & Oktaviani, 2022)	Q3. I like to spend time with friends or classmates. Q4. I get excited by a long discussion in class. Q5. I am excited by talking to others in class. Q6. I work best in groups in class. Q7. I would rather give a speech in front of the class than listen to my classmates' speeches. Q8. I find it easy to speak loudly in class. Q9. I like to discuss things with others in class. Q10. I like giving a speech in front of my classmates in class. Q11. I enjoy group work in class.
Code-Switching (Ahmad & Shaima, 2016)	Q1. Code switching has affected my academic performance. Q2. I often find myself subconsciously code switching from English to another language. Q3. Code switching is a common occurrence in my daily conversations. Q4. I frequently use code switching during informal writing, such as text messages and social media posts.
Code-Switching (Ahmad & Shaima, 2016)	Q1. Code mixing has affected my academic performance. Q2. I often find myself subconsciously code mixing other languages when using English. Q3. I regularly mix words from other languages when using English in my daily conversation. Q4. I frequently use code mixing during informal writing, such as text messages and social media posts.

In Section A of the questionnaire, demographic information was collected through three single-choice questions (age, gender, english proficiency level) and one closed-ended question (CGPA). For Sections B to G, which assess various factors such as parental involvement, self-esteem, introversion and extroversion levels, code-switching and code-mixing, a 5-point Likert scale was used. Respondents were asked to indicate their level of agreement with each statement, with 5 representing 'strongly agree' and 1 representing 'strongly disagree'. The points for each section are summed up as a total score. The highest achievable scores for each respective section were 50, 95, 60, 55, 20 and 20, while the lowest possible scores were 10, 19, 12, 11, 4 and 4, respectively.

To ensure the reliability of the data obtained from the questionnaire, Cronbach's alpha reliability coefficient will be implemented using SPSS. For our hypothesis analysis, H1 to H9 will be analyzed using Pearson Correlation method to find out if the factors such as parental involvement, self-esteem, level of introversion and extroversion, code switching and code mixing, student's CGPA and MUET result have a relationship between each other. For the mediating effect in H10 to H35, Path Analysis method is implemented using AMOS (v. 26.0; IBM, New York , USA) for Windows to measure the total effect that the mediators had in 3 and 4 levels.

4.0 RESULT

4.1 Cronbach's Alpha

Cronbach's alpha reliability coefficient was used to evaluate the reliability of the results (see Table 3). The alpha correlation coefficients for each section of the questionnaire ranged from 0.72 to 0.89. Hence, the questionnaire items are deemed reliable and acceptable as the coefficients are more than 0.7.

Table 3: Reliability Measurement of Questionnaire Items

	Number of Items	Coefficient of Cronbach's Alpha

Parental Involvement	10	0.893
Self-Esteem	19	0.728
Level of Introversion	12	0.891
Level of Extroversion	11	0.875
Code Switching	4	0.719
Code Mixing	4	0.739

4.2 Pearson Correlation

Table 4 shows the correlation between the variables. Overall, the result indicates that a student's academic performance has no significant correlation with any of the variables. However, there is a significant and positive relationship between parental involvement and student's English proficiency **(H1).**

Table 4: Pearson Correlations and Descriptive Statistics of the Variables.

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1. English Proficiency (MUET)	1						.	
2. Parental Involvement	**.292****	1						
3. Self-Esteem	.126	**.378****	1					
4. Level of Introversion	.159	**.334****	**.565****	1				
5. Level of Extroversion	-.025	.176	**.318****	-.181	1			
6. Academic Performance (CGPA)	.084	-.106	-0.25	-.192	.056	1		
7. Code Switching	.029	.125	**.348****	**.339****	**.228***	.022	1	
8. Code Mixing	-.159	.091	**.300****	**.240***	.075	.028	**.713****	1
M	3.1	32.83	64.18	43.84	36.11	3.532	14.11	14.05
SD	.823	8.05	7.612	8.025	7.437	.342	3.25	3.135

Note: Bold values indicate significant *p*-values.

**Correlation is significant at the $p <$ 0.01 level (2-tailed). *Correlation is significant at the $p <$ 0.05 level (2-tailed).

4.3 Path Analysis

Figure 2 shows the Path analysis depicting direct and indirect effects between the multiple factors. The figure shows that parental involvement has shown to be significantly and positively correlated with a student's English proficiency. However, when included in the model, the variable did not indicate any form of significant mediating effect between parental involvement and code mixing or code switching with parental involvement as the mediating effect. Finally, the bias-corrected bootstrap procedure with 5000 bootstrapped samples indicated the stability of the path analysis mediation model, with only one variable that is significant, which is level of introversion and code mixing (see Table 5).

Table 5: Coefficients of the Full Multiple Mediation Model.

	Estimate	***p***	**BootLLCL**	**BootULCL**
Total Effect				

		0.625		
		0.405		
		0.441		
Parental Involvement → Code Switching	0.046		-0.244	0.179
Parental Involvement → Code Mixing	0.040	0.136	-0.254	0.119
Parental Involvement → Academic Performance	0.004		-0.275	0.100
Self-esteem → Code Switching	0.070	0.623	-0.073	0.486
Self-esteem → Code Mixing	0.059	0.232	-0.187	0.343
Self-esteem → Academic Performance	0.007		-0.111	0.398
Level of Introversion → Code Switching	0.069	0.510	-0.192	0.461
Level of Introversion → Code Mixing	0.048		0.130	0.553
Level of Introversion → Academic Performance	0.007	0.003	-0.492	0.009
Level of Extroversion → Code Switching	0.054	0.064	-0.209	0.256
Level of Extroversion → Code Mixing	0.053		0.031	0.488
Level of Extroversion → Academic Performance	0.006	0.855	-0.237	0.213
English Proficiency → Academic Performance	0.045	0.029	-0.074	0.345
		0.784		
		0.223		
Direct Effect				
Parental Involvement → Code Switching	0.016	0.915	-0.179	0.235
Parental Involvement → Code Mixing	-0.075		-0.266	0.133
Parental Involvement → Academic Performance	-0.108	0.443	-0.350	0.069
Self-esteem → Code Switching	0.243	0.223	-0.055	0.478
Self-esteem → Code Mixing	0.074		-0.189	0.343
Self-esteem → Academic Performance	0.138	0.107	-0.113	0.385
Level of Introversion → Code Switching	0.137		-0.150	0.453
Level of Introversion → Code Mixing	0.371	0.636	0.125	0.553
Level of Introversion → Academic Performance	-0.289	0.248	-0.546	-0.030
Level of Extroversion → Code Switching	0.150		-0.213	0.242
Level of Extroversion → Code Mixing	0.282	0.417	0.028	0.484
Level of Extroversion → Academic Performance	-0.034		-0.267	0.204
English Proficiency → Academic Performance	0.149	0.003	-0.064	0.362

		0.032 0.966 0.031 0.712 0.403		
Partial Indirect Effect				
Parental Involvement → English Proficiency → Code Switching		0.125		
Parental Involvement → English Proficiency → Code Mixing		0.743		
Parental Involvement → English Proficiency → Academic Performance	-0.018		-0.144	0.013
Parental Involvement → English Proficiency → Code Mixing → Academic Performance	0.003	0.351	-0.051	0.082
Parental Involvement → English Proficiency → Code Switching → Academic Performance	0.024		-0.035	0.106
Self-esteem → English Proficiency → Code Switching	0.004	0.737	-0.005	0.011
Self-esteem → English Proficiency → Code Mixing	0.008		-0.027	0.006
Self-esteem → English Proficiency → Academic Performance	-0.001	0.607	-0.061	0.038
Self-esteem → English Proficiency → Code Mixing → Academic Performance	0.000	0.608	-0.025	0.038
Self-esteem → English Proficiency → Code Switching → Academic Performance	0.002		-0.024	0.055
Level of Introversion → English Proficiency → Code Switching	0.002	0.830	-0.003	0.004
Level of Introversion → English Proficiency → Code Mixing	0.003		-0.008	0.003
Level of Introversion → English Proficiency → Academic Performance	-0.002	0.838	-0.096	0.027
Level of Introversion → English Proficiency → Code Mixing → Academic Performance	0.000		-0.022	0.044
Level of Introversion → English Proficiency → Code Switching → Academic Performance	0.003	0.882	-0.016	0.062
Level of Extroversion → English Proficiency → Code Switching	0.002		-0.002	0.005
Level of Extroversion → English Proficiency → Code Mixing	0.004	0.577	-0.012	0.003
Level of Extroversion → English Proficiency → Academic Performance	0.005		-0.022	0.088
Level of Extroversion → English Proficiency → Code Mixing → Academic Performance	-0.001	0.474	-0.051	0.019
Level of Extroversion → English Proficiency → Code Switching → Academic Performance	-0.006		-0.065	0.017
	0.002	0.859	-0.006	0.002
	0.003		-0.003	0.016
	-0.001	0.372	-0.042	0.025
	0.032		-0.115	0.017
		0.780		
		0.762		
		0.362		

Level of Extroversion → English Proficiency → Code Switching → Academic Performance		0.498		
English Proficiency → Code Mixing → Academic Performance		0.481		
English Proficiency → Code Switching → Academic Performance		0.673		
		0.484		
		0.802		
		0.329		
Total Indirect Effect				
		0.032		
		0.885		
		0.219		
Parental Involvement → Code Switching	0.040		-0.168	-0.004
Parental Involvement → Code Mixing	0.030	0.704	-0.069	0.055
Parental Involvement → Academic Performance	0.044		-0.028	0.154
Self-esteem → Code Switching	0.029	0.879	-0.074	0.049
Self-esteem → Code Mixing	0.013	0.686	-0.033	0.025
Self-esteem → Academic Performance	0.044		-0.064	0.106
Level of Introversion → Code Switching	0.030	0.554	-0.090	0.038
Level of Introversion → Code Mixing	0.014		-0.039	0.023
Level of Introversion → Academic Performance	0.054	0.809	-0.056	0.170
Level of Extroversion → Code Switching	0.029	0.362	-0.030	0.095
Level of Extroversion → Code Mixing	0.015		-0.024	0.041
Level of Extroversion → Academic Performance	0.050	0.354	-0.087	0.115
English Proficiency → Academic Performance	0.043		-0.117	0.058
		0.781		
		0.847		
		0.623		

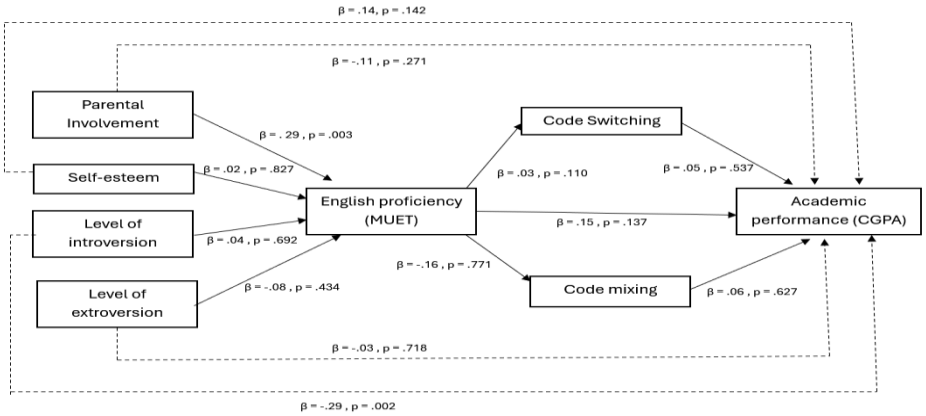

Figure 2. Full Mediation Model for Path Analysis

5.0 DISCUSSION

For the relationship between parental involvement and English proficiency **(H1)**, the result indicated that there is a significant effect which is in line of the hypothesis and also supports the research conducted to determine the correlation between parent's attitude and involvement towards children's English test result (Hosseinpour et al., 2015) and the association of factors affecting Malaysia's student english proficiency (Yeoh, 2021). Therefore, this study is able to confirm the significance of parents' role in improving student's English proficiency. However, English proficiency as a mediating effect between parental involvement and code mixing, code switching **(H18, H22)** did not show any significant effect, indicating that parents have no control towards student's frequency of code switching and code mixing. Moreover, the mediating effect of student's English proficiency, code switching and code mixing **(H14, H28, H32)** between parental involvement and student's academic performance is not significant, contrary to a few studies (Barger et al., 2019; Wang et al., 2023), suggesting that while parent's encouragement towards a student's English learning can have a positive effect, the student's overall academic performance will not be greatly affected by parental involvement **(H7)**. The reason can be attributed to parent's literacy and involvement during children's early years of school at which children have the highest tendency to imitate the behavior of parents, and parents that set an active role model on how to communicate using proper English language would see that their children will talk the same way as them (Smith et al., 2022). This encourages a more fluent style of communication and indirectly develops student's English proficiency. However, a student's academic performance is not something that can be imitated by children, it is the cumulative result of several different factors which includes but is not limited to parental involvement.

Besides, the correlation between a student's self-esteem and English proficiency **(H2)** shows to be insignificant, which does not support previous studies (Gultom & Oktaviani, 2022; Haidar et al., 2020; Utami & Wahyudin, 2022; Skripsiani et al., 2022). Furthermore, English proficiency as the mediating factor between self-esteem and code switching and code mixing **(H19, H23)** proved to have no significant effect, meaning that a student's self-esteem and english proficiency did not matter when estimating the student's rate of code mixing and code switching, which leads to the insignificant effect that english proficiency, code mixing and code switching have as the mediating variables between self esteem and academic performance **(H15, H29, H33)**. This signifies that overall, there is no correlation between self esteem and academic performance **(H8)**, as opposed to the results yielded by previous studies (Noorollahi, 2021). This outcome can be explained by looking into the behavior of students with high self-esteem and low self-esteem. A comparison between mentioned student attributes was conducted and it was revealed that students with higher self-esteem have higher social skills compared to students with lower self-esteem (Casino-García et al., 2021), which means self-esteem has the most prominent effect towards a student's social skill than anything else. Instead, self-esteem should be indirectly

associated with a student's academic performance with social skill as a mediating factor rather than direct association.

In addition, level of introversion and extroversion was found to have no significant correlation towards a student's English proficiency **(H3, H4)**, despite a study stating otherwise (Noviana et al., 2022), suggesting that most of the participants of this study felt that a student's personality is not a determinant of their English proficiency. Besides, the relationship between level of introversion/extroversion and academic performance did not display any significant correlation **(H9, H10)**. To add on, the result of the mediation analysis showed that a student's English proficiency has no mediating effects between the level of introversion or level of extroversion and code mixing or code switching **(H20, H21, H24, H25)**, therefore concluding that student's level of introversion or extroversion has no significant effect towards usage of code switching and code mixing. Using code mixing, code switching and English proficiency as mediators, the result also concluded that there the mediators have no significant effect between level of introversion or level of extroversion towards academic performance **(H16, H17, H30, H31, H34, H35)**, contrary to another study conducted (Paradilla et al., 2020).. According to a research conducted to analyze student's personality types and the implication to problem based learning, the overall outcome states that both introverted and extroverted students were able to display an equal level of problem solving skills with the only difference being the method used (Loppies & Badrujaman, 2021). Extroverted students preferred group communication and information sharing to explore the problems from multiple perspectives whereas introverted students preferred in-depth analysis of the problem to gather information. This result can conclude that the level of introversion and extroversion hardly affects academic performance and a thorough analysis should be conducted to find out how a student's approach to a problem can affect their academic performance.

Lastly, there is no significant correlation between English proficiency and academic performance **(H11)**, contradicting previous studies (Azkiyah et al., 2023; Alrasheed et al., 2021; Gheyathaldin & Shishakly, 2020; Oducado et al., 2020; Mohamad et al., 2020; Wang et al., 2023; Noorollahi, 2021), implying that a student's English proficiency does not affect their academic performance whatsoever. Code switching and code mixing are also not affected by a student's English proficiency **(H5, H6)**. On top of that, the relationship of frequency of code switching and code mixing among students towards a student's academic performance **(H12, H13)** also seems to display different results from other studies (Nawaz et al., 2023; Yeoh, 2021) as it bears no significant correlation. With code mixing and code switching as mediating factors, it is revealed that there is no significant mediation effect towards the relationship between English proficiency and academic performance **(H26, H27)**, a different result compared to a study investigating factors affecting Malaysian student's English proficiency (Yeoh, 2021). This result is due to the fact that a student's overall academic performance is decided based on a number of different subjects which may or may not include English language or English-focused subjects Therefore, using English proficiency as a variable to measure academic performance does not cover the entire scope of the full academic model and instead should be used to analyze the language-related problems faced by students academically, as according to this study that determined the effect of student's English proficiency towards their problems faced in school (Soruç et al., 2021). Due to that, a more logical approach when using English proficiency is to investigate language-related issues faced by students and their overall academic performance with English proficiency as the mediating variable.

6.0 CONCLUSION

This research focused on investigating the relationship between various factors influencing students' academic performance, focusing particularly on the mediating roles of English language proficiency, code switching and code mixing. The factors our research sought to address were parental involvement and personality traits, specifically self-esteem, introversion and extroversion. Our findings highlight a significant positive effect of parental involvement on students' English proficiency, supporting previous studies such as those by Hosseinpour et al.

(2015) and Yeoh (2021). However, English proficiency did not mediate the relationship between parental involvement and both code switching and code mixing, nor did it significantly affect overall academic performance despite initial expectations. This suggests that while parents can enhance English skills, these improvements do not necessarily translate into broader academic success or control over language use dynamics such as code switching and mixing. Similarly, the study revealed no significant correlation between students' self-esteem or personality traits (level of introversion and level of extroversion) and their English proficiency or academic outcomes. This contradicts earlier research suggesting potential links and indicates that internal psychological factors and inherent personality traits may not influence or predict academic success in English as anticipated. Additionally, no significant mediating effects of English proficiency, code switching or code mixing were observed concerning the relationships between self-esteem, personality traits and academic performance, challenging some established theories.

With that said, this research faced several limitations that need consideration. Firstly, the sample size of 100 students is relatively small and may not fully capture the entirety of the student body of TARUMT. This small sample size limits the statistical power of the analysis and the reliability of the conclusions drawn. Moreover, the use of convenience sampling may have introduced biases as the reliance on social networks for distribution likely did not capture the entirety of the student body of TARUMT. To enhance representativeness and generalizability, future research should aim for a larger sample size through the use of a more reliable sampling technique. Furthermore, the research's reliance on the Malaysian University English Test (MUET) as a measure of English proficiency could be considered a limitation as not all university students are required to take MUET. This inconsistency means that our research may not accurately reflect the English proficiency across the entire student population of TARUMT, potentially affecting the validity of the findings related to how English proficiency influences academic outcomes. Future studies would need to address this issue by looking into a more universally applicable measure of English proficiency to ensure a more accurate assessment.

7.0 REFERENCES

Alrasheed, H., Alnashwan, A., & Alshowiman, R. (2021). Impact of English proficiency on academic performance of software engineering students. *ACM International Conference Proceeding Series*, 107–111. https://doi.org/10.1145/3456146.3456163

Azkiyah, S. N., Rahmawati, Y., Shohibussirri, M., Nisa, Y. F., Sunengsih, N., & Mukminin, A. (2023). English proficiency as a predictor of academic performance in the context of non-English as a medium of instruction article information. *PASAA Journal*, *65*, 32–56.

Barger, M. M., Kim, E. M., Kuncel, N. R., & Pomerantz, E. M. (2019). The relation between parents' involvement in children's schooling and children's adjustment: A meta-analysis. *Psychological Bulletin*, *145*(9), 855–890. https://doi.org/10.1037/bul0000201

Casino-García, A. M., Llopis-Bueno, M. J., & Llinares-Insa, L. I. (2021). Emotional intelligence profiles and self-esteem/self-concept: An analysis of relationships in gifted students. *International Journal of Environmental Research and Public Health*, *18*(3), 1–23. https://doi.org/10.3390/ijerph18031006

Dong, Y., Dong, W. Y., Wu, S. X. Y., & Tang, Y. (2020). The effects of home literacy environment on children's reading comprehension development: A meta-analysis. *Educational Sciences: Theory and Practice*, *20*(2), 63–82. https://doi.org/10.12738/jestp.2020.2.005

Ezeh, N. G., Umeh, I. A., & Anyanwu, E. C. (2022). Code Switching and Code Mixing in Teaching and Learning of English as a Second Language: Building on Knowledge. *English Language Teaching*, *15*(9), 106-113. https://doi.org/10.5539/elt.v15n9p106

Gheyathaldin, L., & Shishakly, R. (2020). Impact of english language proficiency on the academic performance of business students. *Asian ESP Journal*, *16*(2.1), 245–272. https://www.researchgate.net/profile/Dina-El-Dakhs/publication/341868752_Do_translation_trainees_translate_stance_markers_adequately_The_case_of_Arabic-English_undergraduates/links/5ed89b6245851529453129b5/Do-translation-trainees-

translate-stance-markers-adequately-The-case-of-Arabic-English-undergraduates.pdf#page=245

Gultom, S., & Oktaviani, L. (2022). The correlation between students' self-esteem and their English proficiency test result. *Journal of English Language Teaching and Learning*, *3*(2), 52–57. https://doi.org/10.33365/jeltl.v3i2.2211

Haidar, K., Sharjeel, M. Y., & Iqbal, S. (2020). Analysis of Self-Esteem in Oral English Language Proficiency among Secondary Schools Students: Issues and Challenges. *Pakistan Social Sciences Review*, *4*(III), 1176–1189. https://doi.org/10.35484/pssr.2020(4-iii)85

Hashim, H., Yunus, M., & Hashim, H. (2020). Lack of Proficiency in English Language: Understanding the Circumstances among the Military Cadets. *Proceedings of the Third Workshop on Multidisciplinary and Its Applications, WMA-3 2019, 11-14 December 2019, Medan, Indonesia*. https://doi.org/10.4108/eai.11-12-2019.2290883

Hosseinpour, V., Sherkatolabbasi, M., & Yarahmadi, M. (2015). The impact of parents' involvement in and attitude toward their children's foreign language programs for learning english. *International Journal of Applied Linguistics and English Literature*, *4*(4), 175–185. https://doi.org/10.7575/aiac.ijalel.v.4n.4p.175

Jabeen, M., Hassan, W., & Ahmad, S. (2023). Code-mixing and code-switching problems among English language learners: A case study of the University of Sahiwal. *Jahan-e-Tahqeeq, 6*(3), 249-258.

Loppies, M., Badrujaman, A., & Sarkadi, S. (2020). Profile of extrovert and introvert personality and the implications in problem based history learning. *Social, Humanities, and Educational Studies (SHEs): Conference Series*, *3*(2), 221–232. https://doi.org/10.20961/shes.v3i2.46243

Mohamad, F., Abdullah, N., Ahmad Buhari, T., Mat Daud, N. S., Ramlan, Z. S., & Swee Ai, T. (2020). Establishing predictive validity of English exit test: Students' EET performance and academic achievement. *International Journal of Modern Languages And Applied Linguistics*, *4*(1), 57–66. https://doi.org/10.24191/ijmal.v4i1.9501

Nawaz, N., Atta, A., & Naseem, N. (2023). The impact of code-switching in affective support and learners' success in Pakistani ESL classrooms at university level. *Journal of Nusantara Studies (JONUS)*, *8*(1), 95–116. https://doi.org/10.24200/jonus.vol8iss1pp95-116

Nesaratnam, S., Wan Salleh, W. H., Foo, Y. von, & Wan Hisham, W. M. W. S. (2020). Enhancing English proficiency and communication skills among Malaysian graduates through training and coaching. *International Journal of Learning and Development*, *10*(4). https://doi.org/10.5296/ijld.v10i4.17875

Noorollahi, N. (2021). On the relationship between Iranian English language teaching students-self-efficacy, self-esteem, and their academic achievement. *Language Teaching Research Quarterly*, *21*, 84–96. https://doi.org/10.32038/ltrq.2021.21.06

Noviana, N., & Oktaviani, L. (2022). The correlation between college student personality types and English proficiency ability at Universitas Teknokrat Indonesia. *Journal of English Language Teaching and Learning*, *3*(1), 54–60. https://doi.org/10.33365/jeltl.v3i1.1709

Odhiambo, J. E. (2021). How code mixing and code switching affect the study of English language. *International Journal of Novel Research in Humanity and Social Sciences*, *8*(4), 23–27. http://repository.rongovarsity.ac.ke/handle/123456789/2353

Oducado, R. M. F., Sotelo, M. G., Ramirez, L. M. M., Habaña, M. P., & Belo-Delariarte, R. G. (2020). English language proficiency and its relationship with academic performance and the nurse licensure examination. *Nurse Media Journal of Nursing*, *10*(1), 46–56. https://doi.org/10.14710/nmjn.v10i1.28564

OECD (2023). *PISA 2022 Results: Factsheets.* Organisation for Economic Co-operation and Development. https://www.oecd.org/publication/pisa-2022-results/country-notes/malaysia-1dbe2061/

Paradilla, N., Dj., M. Z., & Hasanah, U. (2021). The students' extrovert and introvert personality toward speaking performance. *International Journal of Research on English Teaching and Applied Linguistics*, *1*(1), 39–50. https://doi.org/10.30863/ijretal.v1i1.1197

Skripsiani, H., Yukamana, H., & Tahrun, T. (2022). Self-esteem and strategies to increase the student English achievement. *El-Ghiroh : Jurnal Studi Keislaman*, *20*(2), 145–160. https://doi.org/10.37092/el-ghiroh.v20i02.427

Smith, M. M., Hewitt, P. L., Sherry, S. B., Flett, G. L., & Ray, C. (2022). Parenting behaviors and trait perfectionism: A meta-analytic test of the social expectations and social learning models. In *Journal of Research in Personality* (Vol. 96). Academic Press Inc. https://doi.org/10.1016/j.jrp.2021.104180

Soruç, A., Altay, M., Curle, S., & Yuksel, D. (2021). Students' academic language-related challenges in English Medium Instruction: The role of English proficiency and language gain. *System*, *103*. https://doi.org/10.1016/j.system.2021.102651

Sumartono, F., & Tan, Y.-Y. (2018). Juggling two languages: Malay-English bilinguals' code-switching behaviour in Singapore. The Linguistics Journal, 12(1), 108–138. https://www.researchgate.net/profile/Nader-Ayish/publication/328190933_A_transitivity_investigation_of_Nature_journal_articles_The_Linguistics_Journal_Volume_12_Issue_1/links/5bbdae35a6fdcc9552dd3ffc/A-transitivity-investigation-of-Nature-journal-articles-The-Linguistics-Journal-Volume-12-Issue-1.pdf#page=108

Tan, C. Y., Lyu, M., & Peng, B. (2020). Academic benefits from parental involvement are stratified by parental socioeconomic status: A meta-analysis. *Parenting*, *20*(4). https://doi.org/10.1080/15295192.2019.1694836

Tin, T.T., Wei, C.J., Min, O.T., Mooi, L.S., Tiung, L.K., Aitizaz, A., Kit, C.J., Salau, A.O. (2024). Visualization of Personality and Phobia Type Clustering with GMM and Spectral. International Journal of Advanced Computer Science and Applications (IJACSA), Vol. 15(9), pp. 861-869. DOI: 10.14569/IJACSA.2024.0150988

Utami, B. R., & Wahyudin, A. Y. (2022). Does self-esteem influence student English proficiency test scores? *Journal of English Language Teaching and Learning*, *3*(2), 16–20. https://doi.org/10.33365/jeltl.v3i2.1926

Wang, H., Chen, Y., Yang, X., Yu, X., Zheng, K., Lin, Q., Cheng, X., & He, T. (2023). Different associations of parental involvement with children's learning of Chinese, English, and math: A three-wave longitudinal study. *European Journal of Psychology of Education*, *38*(1), 269–285. https://doi.org/10.1007/s10212-022-00605-0

Wang, H., Schultz, J. L., & Huang, Z. (2023). English language proficiency, prior knowledge, and student success in an international Chinese accounting program. *Heliyon*, *9*(8). https://doi.org/10.1016/j.heliyon.2023.e18596

Yeoh, S. L. P. (2021). Factors affecting Malaysian tertiary students' English proficiency [Doctoral dissertation, UTAR]. UTAR Institutional Repository. http://eprints.utar.edu.my/id/eprint/4148

Yu, W., Qian, Y., Abbey, C., Wang, H., Rozelle, S., Stoffel, L. A., & Dai, C. (2022). The role of self-esteem in the academic performance of rural students in China. *International Journal of Environmental Research and Public Health*, *19*(20). https://doi.org/10.3390/ijerph192013317

Zare, J., Aqajani Delavar, K., & Derakhshan, A. (2023). The impact of altruism on the emotions and English summary writing skills of L2 learners: An intervention study in light of positive psychology. *Language Teaching Research*, *0*(0). https://doi.org/10.1177/13621688231151632

8.0 APPENDIX A: QUESTIONNAIRE DETAILS

Table A1.

Section	Questionnaire Item	Options
Demographic	Age	<20;20-21;22-23;24-25;>25
	Gender	Male/Female
	MUET (Band)	5.0+; 5.0; 4.0-4.5; 3.0-3.5; 1.0-2.5
	CGPA	–
Parental Involvement		
My parents ask me about homework regularly. My parents help me with homework. My parents discuss with me about my school days. I talk with my parents about my teachers often. My parents provide time to study at home. My parents emphasize academics more than extracurricular activities. My parents regularly check my exercise books. My parents encourage me to work harder in school. My parents provide me with learning materials such as exercise books, pens, pencils, and text books. My parents always check on my academic progress in school.		Strongly Disagree Disagree Neutral Agree Strongly Agree
Self-Esteem		
I can follow the lessons easily. I daydream a lot in class. I am able to help my classmates with their assignments. I often do my assignments without thinking. I pay attention to the lecturer during lessons. Most of my classmates are smarter than I am. I study hard for my tests. My lecturer feels that I am poor in my work. I am usually interested in my assignment. I often forget what I have learned. I am willing to do my best to pass all the subjects. I get frightened when I am asked a question by the lecturers. I often feel like quitting university. I am good at most of my subjects. I am always waiting for the lessons to end. I always do poorly on tests. I do not give up easily when I am faced with a difficult question in my assignment. I am able to do better than my friends in most subjects. I am not willing to put more effort into my assignment.		Strongly Disagree Disagree Neutral Agree Strongly Agree
Level of Introversion		
I get tired after a long discussion in class. I am calm in class. My voice is quiet in class. I work best alone in class. I find it difficult to speak loudly in class. I listen more than I talk in class. I need quiet time alone after a class with lots of talking. I don't like speaking in front of the whole class. I enjoy working by myself in class. I would rather listen to my classmates' speeches instead of giving one myself. I would rather hear someone else's opinion than share my own.		Strongly Disagree Disagree Neutral Agree Strongly Agree

After class, I like to go home and be by myself.	
Level of Extroversion	
I am bored with individual work in class. I have a lot of energy in class. I like to spend time with friends or classmates. I get excited by a long discussion in class. I am excited by talking to others in class. I work best in groups in class. I would rather give a speech in front of the class than listen to my classmates' speeches. I find it easy to speak loudly in class. I like to discuss things with others in class. I like giving a speech in front of my classmates. I enjoy group work in class.	Strongly Disagree Disagree Neutral Agree Strongly Agree

Table A1. (Continued)

Code Switching	
Code switching has affected my academic performance. I often find myself subconsciously code switching from English to another language. Code switching is a common occurrence in my daily conversations. I frequently use code switching during informal writing, such as text messages and social media posts.	Strongly Disagree Disagree Neutral Agree Strongly Agree
Code Mixing	
Code mixing has affected my academic performance. I often find myself subconsciously code mixing other languages when using English. I regularly mix words from other languages when using English in my daily conversation. I frequently use code mixing during informal writing, such as text messages and social media posts.	Strongly Disagree Disagree Neutral Agree Strongly Agree