Studies in Interdisciplinary Horizons
https://sih-journal.com |
Volume 1 Issue No. 1 |
Received: May 11, 2025 | Accepted: June 10, 2025 | Published: June 20, 2025

Exploring the Temperament Traits of English Major Students in a University Setting

Marianne Angel G. Aligam[1], Jenny Grace B. Agcaoili[2], Xhyrine V. Aniban[3], Warren Mark C. Bermudez[4]
[1]Ifugao State University – Potia Campus
Ifugao, Philippines
Correspondence: aligammarianneangel29@gmail.com

Abstract

This study examined the temperament traits of 82 English major students at Ifugao State University–Potia Campus using a mixed-method research design. A standardized questionnaire measured four temperament types—Sanguine, Melancholy, Choleric, and Phlegmatic—while interviews provided qualitative insights into students' academic behavior. Overall, Choleric was the most dominant temperament (34.1%), followed by Melancholy and Phlegmatic (24.4% each), and Sanguine (20.7%). By age, students aged 23–24 showed a strong dominance of Choleric traits (75%), while the 19–20 age group displayed a more balanced distribution: Choleric (30.5%), Melancholy (28.8%), Phlegmatic (18.6%), and Sanguine (13.6%). Students aged 21–22 were also predominantly Choleric (36.8%) and Phlegmatic (31.6%). By gender, both males and females exhibited a Choleric majority—36.8% of males and 31.7% of females—though female students displayed a more even distribution across all four types. By year level, Choleric temperament increased with academic standing: 28.6% in first year, 36.7% in second year, and 37.5% in third year. Phlegmatic traits also rose in the third year (29.2%), possibly indicating maturing emotional control. Thematic analysis revealed specific challenges by temperament: Sanguine students struggled with distractions and noise, Melancholic students faced anxiety and perfectionism, Choleric students often took control but had difficulty with group cooperation, and Phlegmatic students preferred harmony and avoided leadership roles. These results suggest the importance of designing personality-based instructional strategies to address the emotional and behavioral tendencies of learners for improved academic outcomes.

Keywords: *Age differences, English major, Gender, Temperament traits, Year level*

Suggested citation:
Aligam, M. et al (2025). Exploring the Temperament Traits of English Major Students in a University Setting. *Studies in Interdisciplinary Horizons, 1*(1),47-59 .

Introduction

In education around the world, recognizing individual differences among students has become essential for understanding learning behavior, motivation, and academic outcomes. Research emphasizes that demographic factors such as gender, socioeconomic status, and geographic background significantly influence students' temperament and development. Strickhouser and Sutin (2020) found that lower socioeconomic status correlates with less adaptive temperament traits, such as lower sociability and persistence, affecting long-term educational outcomes. Similarly, Willoughby et al. (2015) observed that differences in children's emotional regulation were more strongly linked to poverty than race, further highlighting the environmental influences on temperament development.

In the Philippines, the importance of personality traits in education has been increasingly recognized. Studies like those of Tus et al. (2021) and Rivera (2023) emphasize how personality factors impact students' academic performance and suggest that understanding these traits can help improve teaching strategies and program planning. Cainday et al. (2023) also established that personality traits relate strongly to work engagement among higher education personnel, indicating that individual differences have a broad impact beyond the classroom. Despite these findings, there remains a gap in the detailed exploration of temperament traits specifically Sanguine, Melancholy, Choleric, and Phlegmatic types among Filipino students, particularly in teacher education programs.

Locally, in the Ifugao province of the Philippines, understanding individual differences is critical to addressing educational challenges, especially for students from remote areas. A study by Ormilla (2022) highlighted how socio-economic and psychological factors influence students' academic outcomes in Alfonso Lista District, Ifugao. Furthermore, Alangui (2018) noted that indigenous identity shapes educational experiences, impacting students' attitudes and perseverance. Given the unique social and cultural context of Ifugao, examining temperament traits among teacher education students can provide valuable insights into their motivations, emotional responses, and learning styles. This understanding is crucial for developing inclusive, culturally sensitive pedagogical strategies that enhance student engagement and academic success.

As Gkonou and Mercer (2017) stated, emotional and social competencies are especially important for English majors, whose academic focus revolves around language, communication, and cultural interpretation. Their frequent engagement in discussions, presentations, and literary analysis makes emotional intelligence (EI) and social intelligence (SI) essential for academic and interpersonal success. Despite this relevance, limited research has addressed how these competencies directly affect English majors' learning experience, Gkonou and Mercer (2017), fostering EI and SI in English majors can enhance their classroom engagement, critical thinking, and communication skills. Integrating these competencies into language instruction can lead to more responsive, effective, and human-centered learning environments.

This study aims to assess the dominant temperament traits among students in the College of Education and examine how these traits vary based on demographic profiles such as age, sex, year level, and academic program. Additionally, the study seeks to identify the challenges perceived by students with different temperament types through interviews, recognizing how these traits impact their learning experiences.

Understanding the temperament profiles of future teachers is significant because it can guide educational institutions in designing interventions that are responsive to students' emotional and motivational needs. Furthermore, by identifying challenges linked to specific temperament types, teacher education programs can create more supportive environments

that foster both personal and academic growth. Ultimately, this study contributes to the broader goal of improving educational quality by ensuring that individual differences are recognized, respected, and addressed.

Statement of the Problem

1. What are the demographic profiles of students in the College of Education, in terms of:
a. Age
b. Sex
c. Year Level

2. What are the challenges perceived of the students who are; (interview)
a. Sanguine
b. Melancholy
c. Choleric
d. Phlegmatic

Methodology

This chapter outlines the methods used to assess individual differences among students. It details the research design, participants, research environment, data collection instruments, data gathering procedures, and statistical techniques employed to analyze the data. The aim is to provide a clear and transparent explanation of how the study was conducted to ensure the reliability and validity of the results.

Research Design

This study employed a mixed-method research design, integrating both quantitative and qualitative approaches. The quantitative component involved the use of a standardized questionnaire to measure students' temperament traits, while the qualitative component utilized open-ended questions to explore students' personal experiences and perceptions regarding their temperaments.
This design was chosen to provide a more holistic understanding of individual differences among students, allowing the researchers to draw both statistical conclusions and thematic insights (Mertens, 2019).

Research Environment

The study was conducted at the College of Education of Ifugao State University – Potia Campus. This institution was selected due to its accessibility and the diverse academic experiences of its students, making it an appropriate setting for examining temperament traits among future educators. The college environment provided a conducive atmosphere for both data collection and participant engagement.

Research Respondents

The respondents were students enrolled in the Bachelor of Secondary Education Major in English, specifically from the first to third-year levels. The researchers employed cluster sampling, treating each year level as a distinct cluster. All students within these clusters were invited to participate, ensuring practicality and efficiency in sample selection.

According to Musa et al. (2020), cluster sampling is particularly suitable when it is not feasible to access everyone in the population, but groups or clusters can be conveniently reached.

A total of 82 students participated in the study: 28 from the first-year level (English 1), 30 from the second-year level (English 2), and 24 from the third-year level (English 3). Participation was voluntary, and only those who provided informed consent were included in the research.

Research Instrument

The researchers utilized structured survey questionnaires, integrating both quantitative and qualitative elements. The quantitative items assessed students' temperament traits using a standardized scale, while the qualitative items consisted of open-ended questions designed to explore the challenges students face based on their temperament traits.

The questionnaire used in this study was adopted from existing literature without modifications. It was directly administered to the respondents without undergoing expert validation or pilot testing, as it was already considered standardized and previously validated in related studies.

Data Gathering Procedure

To ensure a smooth and ethical implementation of the study, several key steps were undertaken. First, the researchers prepared the necessary tools, including the questionnaire, and ensured they were aligned with the study objectives. Following this, permission to conduct the study was sought and granted by the appropriate school authorities. Participants were then briefed about the nature, purpose, and procedures of the study, and written informed consent was obtained from all respondents. Data collection was carried out through the in-person distribution of the survey questionnaires to the identified participants, who were given ample time to complete both the quantitative and qualitative sections. Once the responses were collected, they were carefully encoded, organized, and subjected to appropriate statistical and thematic analyses. Throughout the research process, ethical standards were strictly observed. Participants were informed of their rights, including the freedom to decline or withdraw from the study at any time without facing any consequences. Additionally, confidentiality was always maintained, and any personal identifiers were anonymized to protect the privacy of the respondents.

Statistical Treatment

The following statistical tools and analysis methods were employed to address the research questions of the study. Descriptive statistics, including measures such frequency, and percentage, were used to analyze the demographic profiles of the respondents and to provide a general summary of the students' temperament traits (Trochim, 2020).

For the second research question, descriptive statistics such as frequency were applied to summarize the responses related to each temperament trait (Tronchim, 2020)
To address the third research question, a thematic analysis was utilized to identify, analyze, and interpret recurring patterns and themes from the open-ended responses (Braun & Clarke, 2006).

Results/Findings

This section presents the results of the study on the temperament traits of English major students, highlighting variations by age, gender, and year level. It also includes a thematic analysis of students' experiences based on their dominant temperament types. These findings provide essential insights for aligning instructional strategies with students' personality tendencies to enhance classroom engagement and learning outcomes.

Table 1: *Demographic Profile of Bachelor of Education Major in English by Age*

Temperament Traits	**Age**					
	19-20		21-22		23-24	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Sanguine	13	13.6%	3	15.8%	0	0.0%
Melancholy	17	28.8%	3	15.8%	0	0.0%
Choleric	18	30.5%	7	36.8%	3	75.0%
Phlegmatic	11	18.6%	6	31.6%	1	25.0%
Total	59	100%	19	100%	4	100%

The data by age shows that the 19–20 age group constitutes the majority of the respondents, comprising 59 individuals, while the 21–22 group includes 19, and only 4 respondents are aged 23–24. Across all age groups, Choleric is the most common temperament, especially dominant in the 23–24 bracket at 75%, though this group is quite small. Among 19–20-year-olds, Choleric (30.5%) and Melancholy (28.8%) appear almost equally prevalent, followed by Sanguine (13.6%) and Phlegmatic (18.6%). The 21–22 age group also reflects a similar pattern, with Choleric (36.8%) being most frequent, followed by Phlegmatic (31.6%).

It is assumed that as students grow older, they gain more emotional stability, self-control, and resilience in academic and social situations. The data reflects a clear pattern where younger students are more prone to emotional reactivity and impulsiveness, while older students display greater composure, discipline, and adaptability. This trend supports the notion that temperament evolves with age and experience, influencing how students manage classroom stress and engage in learning.

The data by age shows a clear dominance of the Choleric temperament, especially in the 23–24 age group (75%), suggesting that maturity brings more assertive and goal-oriented traits. This supports Zohar et al. (2018), who found that self-directedness and cooperativeness increase during adolescence, while traits like persistence and harm avoidance decline. As students shift from peer influence to internal values, Choleric traits—such as leadership and independence—become more prominent. These findings highlight the need for educators to tailor strategies that harness assertive students' strengths while supporting those with more reflective or sensitive temperaments.

Table 2: *Demographic Profile of Bachelor of Education Major in English by Gender*

Temperament Traits	**Gender**			
	Male		Female	
	Frequency	Percentage	Frequency	Percentage
Sanguine	3	15.8%	14	22.2%
Melancholy	4	21.2%	16	25.4%
Choleric	7	36.8%	20	31.7%

Phlegmatic	5	26.3%	13	20.6%
Total	19	100%	63	100%

When analyzing the distribution of temperament traits by gender, the results reveal notable differences between males and females. Female respondents (63 in total) outnumber males (19), and their temperament distribution shows a relatively balanced spread among Choleric (31.7%), Melancholy (25.4%), and Sanguine (22.2%), with Phlegmatic trailing at 20.6%. Male respondents, although fewer, also exhibit a dominant Choleric trait (36.8%), followed by Phlegmatic (26.3%) and Melancholy (21.1%). Sanguine is the least common among males at 15.8%.

The assumption is that male and female students exhibit differing temperament traits due to cultural expectations—females being more emotionally expressive and empathetic, while males tend to be more reserved or assertive. The data reveals a consistent pattern: female students often display greater sensitivity, sociability, and expressiveness, whereas male students generally show more emotional restraint and independence, suggesting gender plays a significant role in shaping temperament profiles among English majors.

Pintzinger et al. (2016) shed light on gender-based temperament differences by examining attentional biases. Both genders tend to avoid negative information, but men show a stronger focus on positive stimuli, especially under high negative affect, suggesting a link to more assertive, positive-oriented traits. These insights emphasize the value of recognizing gender-specific tendencies in temperament, which can inform strategies in education and beyond—such as promoting emotional awareness in males and supporting leadership roles among females to foster balanced personal and group development.

Table 3: *Demographic Profile of Bachelor of Education Major in English by Year Level*

Temperament Traits	**Year Level**					
	First Year		Second Year		Third Year	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Sanguine	6	21.4%	5	16.7%	4	16.7%
Melancholy	7	25.0%	9	30.0%	4	16.7%
Choleric	8	28.6%	11	36.7%	9	37.5%
Phlegmatic	7	25.0%	5	16.7%	7	29.2%
Total	28	100%	30	100%	24	100%

Temperament distribution by year level reveals a progression of traits as students advance through their education. Among first-year students, the traits are fairly balanced, with Choleric leading at 28.6%, followed closely by Melancholy (25%) and Phlegmatic (25%), suggesting a diverse range of personality traits as students enter the program. In the second year, Choleric temperament becomes more dominant (36.7%), with Melancholy at 30%, reflecting increased drive and goal orientation, possibly due to growing academic responsibilities. By the third year, Choleric remains the most prevalent (37.5%), but there is also a notable rise in Phlegmatic traits (29.2%), which may indicate a development of calm and consistent behavioral tendencies.

It is assumed that students in higher year levels, having spent more time in the university environment, develop greater emotional stability, responsibility, and confidence. The pattern observed in the data shows that lower-year students tend to experience more anxiety, uncertainty, and emotional fluctuation, while upper-year students demonstrate

improved self-regulation, focus, and goal orientation. This progression underscores how academic experience refines temperament traits over time.

Nasvytiene (2021) highlights that effortful control (EC) positively affects academic achievement, while negative affectivity (NA) hinders it. This supports the observed trend across year levels, where increased Choleric and Phlegmatic traits—linked to decisiveness and emotional regulation—appear to enhance performance. As students advance, their growing self-regulation and adaptability suggest the importance of fostering EC and addressing NA through targeted support that matches their developmental stage and temperament needs.

Thematic Analysis

Challenges Perceived by Students According to Their Dominant Temperament: Sanguine, Melancholy, Choleric, and Phlegmatic

A. Sanguine

Do you find it hard to focus in class or finish your schoolwork? Why?
How does being around friends or a noisy place affect your schoolwork?

B. Melancholy

What do you feel when your work is not as good as you want it to be?
Do you feel worried or stressed when doing hard schoolwork? Why?

C. Choleric

Is it hard for you to work with classmates who don't follow your ideas?
What do you do when others don't agree with your way of doing things?

D. Phlegmatic

Is it hard for you to speak up or lead in group activities? Why?
What do you do when there is a problem in school or with classmates?

Quantitative Response	Code	Theme	Interpret
A. Sanguine ● I get distracted easily when classmates talk. ● I prefer studying with friends but it sometimes leads to incomplete work. ● I enjoy lively environments but it makes it hard to concentrate. ● I can't finish homework in noisy places. ● I love talking more than working sometimes. ● I get bored quickly during long tasks. ● I focus better when things are fun.	Easily distracted, sociable, noise-sensitive, multitasking	Sensitivity to Social & Environmental Stimuli	Sanguine students thrive socially but struggle with concentration and time management, especially in noisy or engaging environments.

• Being around people helps, but sometimes I forget tasks. • I work slower in loud places. • I like group works more than quiet ones. • I multitask and lose focus. • I struggle with silence but need it to focus.			
B. Melancholy • I feel disappointed when my work has flaws. • I worry about meeting expectations. • I redo my work if I find a small mistake. • I get anxious about deadlines. • I'm not satisfied unless it's perfect. • I feel guilty when I underperform. • I compare my work to others often. • I stress easily over school requirements. • I feel embarrassed when I make mistakes. • I double-check everything. • I think a lot about what others think of my output. • I rarely feel proud of my finished work.	Perfectionist, self-critical, anxious, overthinking	Internal Pressure & High Self-Standards	Melancholic students set high standards and are easily discouraged when they fall short, often leading to stress, anxiety, or self-doubt.
C. Choleric • I get frustrated when people don't listen to my ideas. • I want to lead group projects. • I dislike when others don't contribute enough. • I prefer doing things my way.	Assertive, controlling, result-driven, confrontational	Assertiveness and Dominance in Leadership	Choleric students often take charge and expect others to follow; this can lead to conflict in group settings if not balanced by communication and flexibility.

• I feel confident making decisions. • I argue when I believe I'm right. • I find it hard to accept suggestions. • I often take control of group tasks. • I believe I have better ideas most of the time. • I insist on results and efficiency. • I get irritated with indecisive people. • I want clear rules and leadership.			
D. Phlegmatic • I let others lead in group tasks. • I avoid arguments at all costs. • I feel nervous when speaking in front of people. • I go along with group decisions quietly. • I'm not comfortable confronting others. • I wait for others to fix problems. • I usually keep my opinions to myself. • I help only when asked. • I don't volunteer for leadership roles. • I prefer peace over being right. • I don't like tension in groups. • I tend to agree even if I don't like the decision.	Reserved, passive, non-confrontational, harmony-seeking	Conflict Avoidance and Reluctance to Lead	Phlegmatic students prioritize peace and often suppress their opinions, leading to under-participation or missed leadership opportunities despite willingness to cooperate.

Discussions

The Thomas and Chess Approach

In 1977 Thomas and Chess in made a significant contribution to the literature with their longitudinal study, temperament can be observed especially intensely in infants because infancy is the period when human beings are least exposed to environmental stimuli or variables and learned behaviors are very limited in this period (Kodak et al. 2024). According to Kodak et al. 2024, infants and children have three types of temperament" easy,

difficult and slow warming temperament." The concept of" difficult temperament," characterized by high levels of negative affectivity and difficult adaptation to new stimulants, is constantly addressed in temperament studies (Kodak et al. 2024). Thomas and Chess's description of difficult temperament conceptualize children's inability to adapt to new stimuli immediately and their tendency to negativity, and also underlines that the responses of these children are excessive. Children who find it difficult to adjust to novelty and change, have difficulty sleeping and eating, are angry, cry a lot, and are challenged to calm down are children with a difficult temperament. Parents have further difficulties with these children. In contrast, children who are moderate in expressing their feelings, have high tone-regulation skills, and have positive moods are defined as having an easy temperament (Kodak et al. 2024). A slow- warming temperament refers to children with slow reactions, low energy levels, and a while to get used to new places and people.

Thomas and Chess accentuated that temperament can be noticed from early childhood, especially among babies when environmental influences are verified to be minimum. Therefore, they classified children into easy, difficult, and slow-to-warm-up temperaments. Difficult temperament is characterized by high negativity and difficulty in adjustment to unfamiliar stimuli, whereas easy temperament is characterized by a positive frame of mind and adaptability. Slow-to-warm-up children display low energy and slow adjustment. Their work emphasizes that early-emerging patterns of emotion can predict the later behavioral consequences and interactions between parents and children.

The Goldsmith Approach

The Goldsmith Approach is grounded in the psychobiological theory of temperament, emphasizing biologically rooted individual differences in emotional expressiveness and reactivity. Goldsmith and colleagues posit that temperament traits—such as fear, sadness, anger, and activity level—emerge early in life and are relatively stable over time. These traits are considered innate but are also influenced by environmental factors, including parenting style and cultural context. The approach places importance on observational and parent-report methods for assessing these temperamental characteristics. Recent studies have expanded on this framework by identifying distinct temperament types through longitudinal twin studies. For instance, Murillo et al. (2024) identified three temperament types: Negative Dysregulated, Positive Well-Regulated, and Typical Expressive. These types were found to have moderate heritability and were influenced by shared environmental factors, supporting the notion that temperament is both biologically based and environmentally influenced.

Goldsmith brought up a psychobiological grounding of the temperament, focusing on expression and reactivity inborn to all emotional experiences. He suggested that properties of temperament, such as fearfulness, sadness, and anger, are relatively stable but are shaped by environmental effects. Longitudinal twin studies conducted by Goldsmith's lab recognized Negative Dysregulated, Positive Well-Regulated, and Typical Expressive temperament styles, eventually demonstrating the intrinsic involved nature of heredity and environment in the formation of temperament. Just an addition to these usual perspectives for measurement would be observations and parent reports.

The Rothbart Approach

The Rothbart Approach conceptualizes temperament as constitutionally based individual differences in reactivity and self-regulation, shaped by biological, neural, and experiential factors. Rothbart's theory introduces three broad dimensions: Negative Affectivity, Surgency/Extraversion, and Effortful Control. This model emphasizes the development of self-regulation, particularly through effortful control, which plays a vital role

in managing emotions and attention. Recent research has applied Rothbart's model to various developmental outcomes. For example, Castellanos and Houston (2024) utilized the Early Childhood Behavior Questionnaire (ECBQ) to assess temperament in toddlers with and without prelingual hearing loss. They found that children with prelingual hearing loss exhibited higher levels of surgency and lower levels of effortful control compared to their hearing peers, highlighting the applicability of Rothbart's dimensions in diverse populations.

Additionally, Rothbart's framework has been instrumental in understanding the development of self-regulation. Lengua et al. (2024) emphasized the significance of integrating contextual, relational, and dynamic systems approaches to fully comprehend the role of temperament in children's development. They underscored the importance of considering social and environmental contexts when examining temperament and its influence on developmental outcomes.

According to Rothbart, temperament is operationally defined as constitutionally based differences in reactivity and self-regulation, modified by biological, neural, and experiential factors. She offered three dimensions: Negative Affectivity, Surgency/Extraversion, and Effortful Control. She studied how the self-regulation developed by means of effortful control is used to predict developmental outcomes, especially in disparate situations such as prelingual hearing loss. Rothbart's model underlines the ever-changing interaction between individual characteristics and the environment/social factors.

Synthesis: The three models collectively depict temperament as a biologically based attribute that emerges early in life and develops through an interactive process with the environment. Thomas and Chess dealt with behavioral types more or less in infancy and stood for the supremacy of difficulties and strengths in emotional flexibility. Using a psychobiological approach to temperament, Goldsmith stressed emotional characteristics and provided multiple twin studies confirming genetic and environmental joint effects. Rothbart links emotional reactivity with self-regulation through processes and places temperament in a developmental and contextual framework. These models therefore converge on illustrating that temperament is not static but rather variously dynamic under multifarious biological, parenting, and sociocultural influences, emphasizing the need to account for both innate dispositions and the environmental context in studying child development.

Conclusions

The Choleric temperament emerged as the most prevalent among older students, suggesting a developmental trend toward increased assertiveness and leadership with age. Both male and female students predominantly displayed Choleric traits, though females exhibited a more balanced distribution across temperament types. As students advance academically, Choleric traits become more pronounced, reflecting a growing focus on goal-oriented behavior. Sanguine students, known for their sociability, were found to be easily distracted, which can hinder focus and task completion. In contrast, Melancholic students often face stress linked to perfectionism and fear of failure. While Choleric students demonstrate strong leadership capabilities, they may encounter challenges in collaboration and accepting differing perspectives. Lastly, Phlegmatic students tend to avoid conflict and leadership roles, potentially limiting their active participation in group settings.

Funding

This research received no external funding

Acknowledgment

Above all, the researchers thank God for the strength and wisdom to complete this study. Gratitude is extended to Ifugao State University–Potia Campus and the College of Education for their support, and to the English major students who participated in the research. Special appreciation is given to their college dean, Dr. Matronillo M. Martin, and their research adviser, Sir Warren Mark C. Bermudez, for valuable guidance and encouragement. Lastly, heartfelt thanks to their families and friends for their unwavering support, motivation, and financial assistance throughout this academic journey

Conflicts of Interests

The author declares no conflict of interest.

References

Alangui, W. V. (2018). *Building stone walls: A case study from the Philippines.* In Numeracy as Social Practice (pp. 40-58). Routledge.

Attentional biases in healthy adults: Exploring the impact of temperament and gender. *Journal of behavior therapy and experimental psychiatry*, *52*, 29-37.

Butac, S. (2021). Communication Satisfaction: A Determinant for Faculty Job Satisfaction in State Universities and Colleges in NCR. 2 (1) : 286-305.

Caranguian, C. B. (2022). Family-related Factors Influencing Success in the Licensure Examination for Teachers. International Journal of Educational Sciences. 38 (1-3), 62-69.

Cainday, M. R. L., Chan, F. A. O., & Bestuer, G. M. (2023). Relationship of personality traits and organizational climate on work engagement among higher education personnel in the Philippines. *Applied Business and Education Research*, 4(9),3123–3133.

Castellanos, I., & Houston, D. M. (2024). Temperament in toddlers with and without

Gkonou, C and Mercer, S (2017) *Understanding emotional and social intelligence among English language teachers.* Discussion Paper. British Council ELT Research Papers.

Guncel Yaklasimlar – Current Approaches in Psychiatry, 16(1), 48–57.

K. (2024). Development of temperament types from infancy to adolescence:Genetic and environmental influences with an economically and racially/ethnically diverse sample. *Developmental Psychology*. Advance online publication.

Kodak, R. N., & Güzel, H. Ş. (2023). Aggression among Preschool Children within theFramework of Temperament, Attachment and Parental Attitudes. *Psikiyatride*

Lengua, L. J., Gartstein, M. A., Zhou, Q., Colder, C. R., & Jacques, D. T. (2024).

Murillo, A. S., Clifford, S., Cheng, C. H., Doane, L. D., Davis, M. C., & Lemery-Chalfant, Nasvytienė, D., & Lazdauskas, T. (2021). Temperament and Academic Achievement in Children: A Meta-Analysis. *European Journal of Investigation in Health, Psychology and Education, 11*(3), 736–757.

Ormilla, R. C. G. (2022). Socio-economic, psychological and environmental factors in the academic performance of elementary pupils of Alfonso Lista District, Ifugao, Philippines. *EDUCATUM Journal of Social Sciences*, *8*(1), 1-12.

Pintzinger, N. M., Pfabigan, D. M., Tran, U. S., Kryspin-Exner, I., & Lamm, C. (2016). prelingual hearing loss. *Journal of Speech, Language, and Hearing Research,67(1)*, 232–243.

Rivera, R. (2023). Assessment of five factor model of personality traits of senior high school students: Basis for faculty development program. *International Journal of Research Studies in Education,* 12 (5), 11–22.

Temperament and child development in context. Cambridge University Press.

Tus, J. (2019). The impact of the personality traits on the academic achievement of the senior high school students. *Journal of Global Research in Education and Social Science*, 13(6), 208–212. Retrieved from

Tus, J., Perante, L., Espiritu, N. A., & Paras, N. E. (2021). Amidst the new normal of education: The personality traits and its influence on the Filipino senior high school students' academic performance. *International Journal of Psychology and Counseling,* 11(1), 125–135.

Willoughby, M. T., Stifter, C. A., Gottfredson, N. C., & Family Life Project Investigators (2015). The epidemiology of observed temperament: Factor structure and demographic group differences. *Infant Behavior and Development*, *39*, 21-34.

Zohar, A. H., Zwir, I., Wang, J., Cloninger, C. R., & Anokhin, A. P. (2019). The development of temperament and character during adolescence: The processes and phases of change. *Development and Psychopathology*, *31*(2), 601-617.