

Research Article

Relationship Between *Neuroticism Personality* And Academic Performance

Ahmad Munjirin¹, Fajra Pahlevi², Diah Karmiyati³, Nurul Fajri Assakinah⁴

1. Universitas Muhammadiyah Malang, ahmadmunjirin98@gmail.com
2. Universitas Muhammadiyah Malang
3. Universitas Muhammadiyah Malang
4. UIN Sunan Kalijaga Yogyakarta

Copyright © 2023 by Authors, Published by **Amandemen: Journal of Learning, Teaching and Educational Studies**. This is an open access article under the CC BY License <https://creativecommons.org/licenses/by/4.0/>

Received : July 21, 2023

Revised : August 08, 2023

Accepted : September 20, 2023

Available online : October 30, 2023

How to Cite: Ahmad Munjirin, Fajra Pahlevi, Diah Karmiyati, & Nurul Fajri Assakinah. (2023). Relationship Between Neuroticism Personality And Academic Performance. *Amandemen: Journal of Learning, Teaching and Educational Studies*, 1(2), 51–61. <https://doi.org/10.61166/amd.v1i2.36>

Abstract. Academic success is very important in an individual's life, one form of academic success is academic achievement. Academic achievement is important because of the evaluation results of the educational activity process. One of the factors that influence academic achievement is neuroticism personality. Neuroticism personality is a condition of despair, panic in stressful situations, and negative emotions. The effect of neuroticism on academic performance: 1). Anxiety Tendencies 2). Negative Feelings, 3). Response to criticism, 4). Emotion Regulation. The purpose of the study was to determine the relationship between neuroticism personality and academic achievement. This

research uses a literature review study, with the results of systematic literature review conducted from 13 research journals showing that neuroticism personality has a relationship with academic achievement.

Keywords: Academic Achievement, Neuroticism Personality

INTRODUCTION

Students are said to be successful when they are able to show changes in thinking abilities, attitudes, and skills. Changes in learning outcomes can be observed, demonstrated, and measured in student skills or achievements as a result of learning experiences built during the learning process (Andriani & Rasto, 2019). Academic success is critical to students' individual life paths, careers, and future professional success. Suryabrata (Sidabutar et al, 2020) states that academic achievement is the result of teaching evaluation achieved after students experience the formal teaching and learning process within a certain period of time. Academic achievement is also a measure of the level of student understanding of a subject, which is given after students go through the learning process within a certain period of time and is expressed in the form of grades.

There are many aspects that can be used as a measure of academic success in organizing learning activities. The success of the learning process is indicated by academic achievement that satisfies students, focusing on the results achieved. Winkel (in Prayono, 2020) argues that achievement is evidence of the achievement of the learning process for the effort to learn. Academic achievement can be influenced by several things, namely the quality of teaching, student abilities, and the time it takes students to understand and explain lessons. Academic success is the ultimate goal that a person aspires to after successfully carrying out educational activities.

Based on the results of the 2015 PISA (*Program for International Student Assessment*) study, an international research program that is one of the cooperation programs in several OECD (*Organization for Economic Cooperation and Development*) member countries. Obtained information that mastery of the material for Indonesian students is still relatively small. Indonesian students' achievement in science was 62nd out of 70 countries assessed (Ariningtyas et al, 2017).

Academic achievement is important because it is the result of an evaluation of the process of educational activities, although high achievement does not necessarily guarantee the high quality of education. So, academic achievement is an ability that is knowledge (cognitive), attitude (affective), and skills (psychomotor) obtained through the learning process. Academic achievement is often reflected in how students learn which is influenced by two factors, namely internal factors and external factors. Internal factors such as attitude, intelligence, interest, talent, independence, motivation and personality, while external factors such as the social

environment, and facilities provided (Jaya, 2019). Student achievement can be influenced by personality, because personality has a relationship with academic achievement (Akomolafe, 2013), and personality is an important aspect as a predictor in learning achievement (Prayono et al, 2021).

In the context of education, personality has an influence on student achievement. The personality referred to in this study is neuroticism personality, where this personality reflects negative emotions such as anger, anxiety, depression when faced with stressful situations. Students who are high in neuroticism have difficulty overcoming academic challenges (Komarraju & Karau, 2005). Thus, neuroticism personality is a condition of inability to cope with stress, despair, and panic in stressful situations. Neuroticism personality is identified with negative emotions and nervousness. The six specific and unique aspects that describe this personality are anxiety, hostility, depression, vulnerability, impulsivity and self-esteem. Therefore, neuroticism identifies people who cannot control their impulses and have difficulty coping with stress (Kuciel, 2019).

Research related to the relationship between neuroticism personality and academic achievement is research conducted by Premuzic & Furnham (in Al-Naggar et al, 2015) which reveals that neuroticism personality is negatively related to academic achievement. In line with Tulung et al's research (2022) that there is an influence of neuroticism personality on academic achievement even though it is in the low category.

While neuroticism can have a negative impact on academic performance, it is important to remember that personality is not static, and many other factors also influence academic performance. Furthermore, someone with high levels of neuroticism may also have other strengths in academics such as creativity or sensitivity to the feelings of others.

Based on the background and theory that has been presented, the hypothesis in this study is that neuroticism personality is related to academic achievement.

METHODS

This research is a *literature review* study. The data sources in this study come from literature obtained from the internet. Literature searches were conducted starting in December 2022, in six electronic databases, namely (google scholar, Elsevier, Originil Paper, MCSER-CEMAS, Routledge, Springert, and SINTA) using the keywords "*neuroticism personality and academic achievement*", "*neuroticism and academic achievement*", "*personality and academic performance*", "*neuroticism personality relationship on student achievement*", and "*neurotic personality relationship on student achievement*", thus obtaining 13 research journals on the relationship between *neuroticism personality* and academic achievement, starting from 2011 to 2021. The 13 research journals collected use a quantitative approach

with a correlational method to see the relationship or influence of the independent variable with the dependent variable.

Furthermore, researchers conducted a descriptive analysis of the collected research journals to find out how the relationship of the independent variables to the dependent variable, namely *neuroticism personality* and academic achievement. So that from the literature review, conclusions are finally obtained about the relationship of the independent variable to the dependent variable.

RESULTS AND DISCUSSION

Table 1. List of Research Journals

No.	Author	Year	Title	Journal
1	Meera Komarraju, Steven J Karau, Ronald R. Schmeck, & Alen Avdic	2011	The Big Five Personality Traits, Learning Styles, and Academic Achievement	Personality and Individual Differences
2	Soraya Hakimi, Elaheh Hejazi, & Masoud Gholamali Lavasani	2011	The Relationships Between Personality Traits and Students' Academic Achievement	Procedia - Social and Behavior Sciences
3	Iulia Ciorbe, & Florentina Pasarica	2013	The Study of the Relationship between Personality and Academic Performance	Procedia - Social and Behavioral Sciences
4	Tim De Feyter, Ralf Caers, Claudia Vigna, & Dries Berings	2012	Unravelling the Impact of the Big Five Personality Traits on Academic Performance: The Moderating and Mediating Effects of Self-Efficacy and Academic Motivation	Learning and Individual Differences
5	Safdar Rehman Ghazi, Gulap Shahzada, & Saif Ullah	2013	Relationship between Students' Personality Traits and Their Academic Achievement in Khyber Pakhtunkhwa, Pakistan	Journal of Educational and Social Research
6	Pia Rosander, & Martin Backstrom	2014	Personality Traits Measured at Baseline Can Predict Academic Performance in Upper Secondary School Three Years Late	Scandinavian Journal of Psychology
7	Florina Nechita, D O Alexandru, R Turcu-Stiolica, & D Nechita	2015	The Influence of Personality Factors and Stress on Academic Performance	Current Health Sciences Journal
8	Irina A Novikova, & Alexandra A Vorobyeva	2017	Big Five Factors and Academic Achievement in Russian Students	Psychology in Russia: State of the Art
9	Asina Chrtistina Rosito	2018	An Exploration of Big Five Personality Traits and Their Effects on Academic Achievement	Journal of Educational & Counseling Psychology

10	Sebastian Bergold, & Ricarda Steinmayr	2018	Personality and Intelligence Interact in the Prediction of Academic Achievement	Journal of Intelligence
11	Vidya Bhagat, Charan Kishor Shetty, Rohayah Husain, Khairi Che Mat, Nordin Bin Simbak, Myat Moe Thwe Aung, & San San Oo	2019	The Relationship Between Big Five Personality Traits and Academic Performance in Medical Students	Research J. Pharm. And Tech.
12	Ekrem Bahcekapili, & Selcuk Karaman	2020	A Path Analysis of Five-Factor Personality Traits, Self-Efficacy, Academic Locus of Control and Academic Achievement among Online Students	Knowledge Management & E-Learning
13	Saidunnisa Begum, Manjunatha Goud BK, Najila Abdul Hameed, Nadiya Dileep, & Sreenidhi Geetha Santhosh	2021	Relation Between Personality Traits and Academic Performance Among University Students of RAKMHSU, UAE-Using a Big Five Model	Biomedical & Pharmacology Journal

Research conducted by Komarraju et al (2011), the results show that neuroticism personality affects academic achievement. Individuals who experience anxiety, self-doubt, and negative emotions tend to be detached from the learning process and may not survive when faced with difficulties. These results are reinforced by Rosito (2018) that neuroticism personality contributes a significant influence on academic achievement, although the contribution is relatively small. Neuroticism is one of the five main personality factors in the Five-Factor Model of Personality, also known as the Big Five model. These personality factors include Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness. Neuroticism is a personality trait that reflects levels of emotional instability, anxiety, depression, anger, and tension. Academic performance is an important aspect in the lives of students and college students that can be influenced by various factors. One factor that may have a significant impact is one's personality. One dimension of personality that has gained attention is neuroticism.

Soraya et al (2011) suggested that there is a negative relationship between neuroticism personality and academic achievement because neuroticism personality is accompanied by anxiety and other fears, doubts and other problems that weaken academic achievement. Furthermore, students who have high levels of neuroticism tend to score lower in academic achievement, meaning that there is a negative relationship between neuroticism personality and academic achievement (Novikova & Vorobyeva, 2017). Neuroticism personality is significantly negatively associated with final exam scores (Bhagat et al, 2019). This opinion is in line with the results of Bahcekapili & Karaman's research (2020) which revealed that neuroticism

personality has an indirect negative effect on academic achievement. Reinforced by the statement that neuroticism negatively affects academic performance (Ciorbea & Pasarica, 2012).

In other words, students who have high neuroticism personality will have lower scores than students whose neuroticism personality is in the low category. This research suggests that students with neuroticism personality have a higher failure rate in examinations. In other words, neuroticism personality is significantly negatively related to academic achievement due to the emotional instability of anxiety, stress, and depression. Its characteristics tend to procrastinate trivial things such as studying and become stressed because they are unable to complete their assignments (Begum et al, 2021).

Meanwhile, Feyter et al (2012) revealed that neuroticism personality has a positive effect on academic achievement. This opinion is in line with the results of research that conveys that neuroticism personality has a positive effect on academic achievement (Nechita et al, 2015). Reinforced by previous research which revealed that there is a positive relationship between neuroticism and academic performance (Rosander & Backstrom, 2014). However, a different opinion conveyed by Ghazi et al (2013) revealed that there was no significant relationship between student personality neuroticism and academic achievement. Reinforced by the expression that neuroticism does not correlate with GPA (Bergold & Steinmayr, 2018).

The influence of neuroticism on academic performance can vary from individual to individual. Here are some of the ways in which neuroticism personality can affect one's academic performance:

1. Anxiety Tendencies: Individuals high in neuroticism tend to be more anxious and easily affected by stress. This can interfere with their concentration and focus, thus affecting their ability to learn and perform well in school.
2. Negative Feelings: People with high levels of neuroticism are more prone to negative feelings such as depression and anxiety. This can lead to a lack of motivation to learn and participate in academic activities.
3. Response to criticism: Individuals with high neuroticism may be more vulnerable to criticism and failure. They can feel too devastated by failure or negative comments, which can affect their confidence and motivation to achieve good performance.
4. Emotion Regulation: One's ability to regulate their emotions can also be affected by neuroticism. If one struggles to regulate negative emotions such as anger or anxiety, this can interfere with their concentration and academic performance.

Relationship between Neuroticism Personality and Academic Performance

Some of the research results above found different results. First, there are studies that show that neuroticism is negatively correlated with academic achievement, the explanation revolves around the effects of anxiety and strong

negative emotions that affect memory, attention, insecurity, confidence in one's abilities, and lead to low learning. These results are in accordance with Premuzic & Furnham's statement (in Rimfeld et al, 2016) that neuroticism personality negatively predicts academic achievement. Neuroticism personality has a negative contribution although not significant, because individuals with neuroticism tend to be emotionally unstable, feel anxious and stressed (Akomolafe, 2013). In addition, it could be because neuroticism individuals have strong effects of anxiety and negative feelings, which affect memory, attention, and self-efficacy.

However, some research suggests neuroticism personality has a positive effect on academic achievement. Students who are motivated to reach the top may experience a form of achievement anxiety that motivates them to study. Similarly, certain levels of anxiety and perfectionism in neuroticism people may contribute to higher willpower and thus higher academic success in students (Bratko et al, 2006). As this relationship varies depending on the level of neuroticism, that may explain the influence of neuroticism on academic achievement. In addition, students with neuroticism always have a high level of academic achievement if the student has good self-efficacy (Bahcekapili & Karaman, 2020).

Furthermore, there is research that states there is no relationship between neuroticism personality and achievement. These results are in line with Mammadov et al (2021) which state that between neuroticism personality and achievement have no relationship, these results are reinforced that neuroticism personality has no significant effect on learning achievement (Prayono et al, 2021). In line with the results of Analya & Rohinsa's research (2017) that neuroticism personality and academic achievement have no influence, because personality is not designed to predict academic performance/achievement (Ackerman & Haggstad, 1997).

Impact of Neuroticism Personality and Academic Performance

Ainie et al (2023) presented several findings showing the negative impact of neuroticism on academic achievement. These include: 1) Emotional instability: Neuroticism is linked to emotional instability, which makes it difficult for students to concentrate on schoolwork and handle stress. 2) Poor coping skills: People with high levels of neuroticism may have poor coping skills, making it difficult for them to overcome obstacles and failures in the classroom. 3) Decreased motivation: Neuroticism has been associated with decreased motivation, which makes it difficult for students to maintain interest and concentration on their academics. 4) Lower self-esteem: Neuroticism and low self-esteem are linked, making it difficult for students to be confident in their own talents. In addition, Efendy (2021) added the impacts, namely: first, high stress and anxiety. This means that individuals with high levels of neuroticism are more prone to stress and anxiety. This can interfere with their capacity to learn effectively and appropriately. Second, difficulty in coping with failure, meaning that individuals with high levels of neuroticism may have difficulty

in coping with criticism and failure. They continue to feel burdened by failure and are unwilling to understand and learn from these experiences.

In the long run, neuroticism can negatively impact academic career prospects. A person with high levels of neuroticism can experience severe stress and anxiety, low motivation, difficulty overcoming obstacles, emotional instability and high self-esteem, all of which can hinder their ability to succeed academically. It is important for this person to develop their stress management strategies and strengthen their coping mechanisms to improve their academic productivity.

Factors that Can Mediate or Moderate the Relationship between Neuroticism Personality and Academic Performance

Based on the results of the analysis in previous studies, there are several factors that can mediate or moderate the relationship between neuroticism personality and academic achievement, namely: first, motivation, it was found that organizational factors mediated the relationship between achievement motivation and work performance. This suggests that motivation can play a mediating role in the relationship between personality traits such as neuroticism and academic performance. Second, stress, it was found that academic stress mediated the relationship between academic performance and student stress. This suggests that stress may play a mediating role in the relationship between neuroticism and academic performance (Kusumo, 2020; Ekawarna, 2020; Jannah, 2022).

CONCLUSION

Neuroticism is negatively correlated with academic achievement, with explanations surrounding the effects of fear and strong negative emotions on memory, attention span, and insecurity. In addition, having a positive correlation, students with neuroticism personality always have a high level of academic achievement if the student has good self-efficacy. So, the researcher concluded that there is a relationship between *neuroticism personality* and academic achievement.

REFERENCES

- Ackerman, P. L., & Heggestad, E. D. (1997). Intelligence, personality, and interests: Evidence for overlapping traits. *Psychological Bulletin*, 121(2), 219-245. <https://doi.org/10.1037/0033-2909.121.2.219>
- Ainie, A, N., Zainuddin, K., & Akmal, N. (2023). The relationship between big five personality and academic procrastination in completing final assignments for students during the covid-19 pandemic. *Journal of Education, Social and Humanities*, 2(2), 173-184.

- Akomolafe, M. J. (2013). Personality Characteristics as Predictors of Academic Performance of Secondary School Students. *Mediterranean Journal of Social Sciences*, 4(2), 657-664. Doi:10.5901/mjss.2013.v4n2p657
- Al-Naggar, R. A., Osman, M. T., Ismail, Z., Bobryshev, Y. V., Ali, M. S., & Gonzalez, M. M. (2015). Relation between Type of Personality and Academic Performance among Malaysian Health Sciences Students. *iMedPub Journals*, 8(182), 1-8. doi: 10.3823/178
- Analya, P., & Rohinsa, M. (2017). The Contribution of Personality Traits to Learning Achievement in Students of the Faculty of Psychology Class of 2014 at University 'X' Bandung. *Humanitas*, 1(2), 113-120. <https://doi.org/10.28932/humanitas.v1i2.420>
- Andriani, R., & Rasto. (2019). Learning Motivation as a Determinant of Student Learning Outcomes. *Journal of Office Management Education*, 4(1), 80-86. doi: 10.17509/jpm.v4i1.14958
- Ariningtyas, A., Wardani, S., & Mahatmanti, W. (2017). Effectiveness of Student Worksheet with Ethnoscience Content on Salt Hydrolysis to Improve Science Literacy of High School Students. *Journal of Innovative Science Education*, 2(2), 186-196. DOI [10.15294/JISE.V6I2.19718](https://doi.org/10.15294/JISE.V6I2.19718)
- Bahçekapılı, E., & Karaman, S. (2020). A path analysis of five-factor personality traits, self-efficacy, academic locus of control and academic achievement among online students. *Knowledge Management & E-Learning*, 12(2), 191-208. <https://doi.org/10.34105/j.kmel.2020.12.010>
- Begum, S., BK, M, G., Hameed, N, A., Dileep, N., & Santhosh, S, G. (2021). Relation Between Personality Traits and Academic Performance Among University Students of RAKMHSU, UAE-Using a Big Five Model. *Biomedical & Pharmacology Journal*, 14(4), 2123-2129. <https://dx.doi.org/10.13005/bpj/2309>
- Bergold, S., & Steinmayr, R. (2018). Personality and Intelligence Interact in the Prediction of Academic Achievement. *Journal of Intelligence*, 6(27), 1-18. doi:10.3390/jintelligence6020027
- Bhagat, V., Shetty, C, K., Husain, R., Mat, K, C., Simbak, N., Aung, M, M, T., & Oo, S, S. (2019). The Relationship between Big Five Personality Traits and Academic Performance in Medical Students. *Research J. Pharm. and Tech*, 12(9), 4189-4196. DOI: 10.5958/0974-360X.2019.00721.2
- Bratko, D., Chamoro, T., & Saks, Z. (2006). Personality and School Performance: Incremental Validity of Self- and Peer-Ratings Over Intelligence. *Personality and Individual Differences*, 41, 131-142. <https://doi.org/10.1016/j.paid.2005.12.015>
- Broeren, S., Muris, P., Bouwmeester, S., van der Heijden, K, B., & Abee, A. (2011). The Role of Repetitive Negative Thoughts in the Vulnerability for Emotional

- Problems in Non-Clinical Children. *Journal of Child and Family Studies*, 20 (2), 135-148. doi:10.1007/s10826-010-9380-9
- Ciorbea, I., & Pasarica, F. (2013). The Study of the Relationship Between Personality and Academic Performance. *Procedia-Social and Behavioral Sciences*, 78, 400-404. doi: 10.1016/j.sbspro.2013.04.319
- Efendy, M. (2021). Systematic review: the relationship between the big five personality model and student motivation at school. *Suka: Journal of Psychology Research*, 2(1), 82-91.
- Ekawarna. (2020). *Job Stress: Causes and Implications*. Jambi: Salim Media Indonesia.
- Feyter, T. D., Caers, R., Vigna, C., & Berings, D. (2012). Unraveling the impact of the Big Five personality traits on academic performance: The moderating and mediating effects of self-efficacy and academic motivation. *Learning and Individual Differences*, 22, 439-448. doi:10.1016/j.lindif.2012.03.013
- Friskilia, O., & Winata, H. (2018). Self-Regulation as a Determinant of Vocational High School Student Learning Outcomes. *Journal of Office Management Education*, 1(2), 37-44. doi: 10.17509/jpm.v3i1.9454
- Ghazi, S. R., Shahzada, G., & Ullah, S. (2013). Relationship between Students' Personality Traits and their Academic Achievement in Khyber Pakhtunkhwa, Pakistan. *Journal of Educational and Social Research*, 3 (2), 437-444.
- Hakimi, S., Hejazi, E., & Lavasani, M. G. (2011). The Relationship Between Personality Traits and Students Academic Achievement. *Procedia - Social and Behavioral Sciences*, 29, 836-845. doi:10.1016/j.sbspro.2011.11.312
- Jannah, R., Yuzarion, & Purwadi. (2022). The relationship between self-efficacy and procrastination in tahfidz Qur'an students. *Al-Qalb: Journal of Islamic Psychology*, 13(2), 116-120. DOI:[10.15548/alqalb.v13i2.4280](https://doi.org/10.15548/alqalb.v13i2.4280)
- Jaya, F. (2019). The Effect of Learning Motivation and Library Utilization on Learning Achievement (Study on Economic Education Students at Pamulang University in 2018/2019). *PEKOBIS Journal of Education, Economics and Business*, 4(1), 13-23. DOI: <http://dx.doi.org/10.32493/pekobis.v4i1.P13-23.2765>
- Komaraju, M., & Karau, S. J. (2005). The Relationship between the Big Five Personality Traits and Academic Motivation. *Personality and Individual Differences*, 39, 557-567. doi:10.1016/j.paid.2005.02.013
- Komaraju, M., Karau, S. J., Schmeck, R. R., & Avdic, A. (2011). The Big Five Personality Traits, Learning Styles, and Academic Achievement. *Personality and Individual Differences*, 51, 472-477. doi:10.1016/j.paid.2011.04.019
- Kuciel, E. P. (2019): Mediation effect of self-efficacy in the relationship between neuroticism and L2 attainment. *Journal of Multilingual and Multicultural Development*, DOI: 10.1080/01434632.2019.1684929
- Kusumo, R. D. (2020). The effect of innovation behavior and personality on employee performance with job satisfaction as a mediating variable (study on

- employees of PT. Putra Utama Motor Sukoharjo). Thesis, Islamic University of Indonesia.
- Mammadov, S., Cross, T, L., & Kubilius, P, O. (2021) A Look Beyond Aptitude: The Relationship Between Personality Traits, Autonomous Motivation, and Academic Achievement in Gifted Students, *Roeper Review*, 43(3), 161-172, DOI: 10.1080/02783193.2021.1923595
- Nechita, F., Alexandru, D, O., Stiolica, R, T., & Nechita, D. (2015). The Influence of Personality Factors and Stress on Academic Performance. *Current Health Sciences Journal*, 41(1), 47-61. DOI: 10.12865/CHSJ.41.01.07
- Novikova, I, A., & Vorobyeva, A, A. (2017). Big Five Factors and academic achievement in Russian students. *Psychology in Russia: State of the Art*, 10(4), 93-106. doi: 10.11621/pir.2017.0409
- Prayono, A., Rahmi, S., & Sovayunanto, R. (2021). Big Five Personality in Student Learning Achievement. *Orien - Student Scientific Horizons*, 1(1), 1-8. DOI: 10.30998/ocim.v1i1.4579
- Rimfeld, K., Kovas, Y., Dale, P, S., & Plomin, R. (2016). True Grit and Genetics: Predicting Academic Achievement from Personality. *Journal of Personality and Social Psychology*, 3(5), 780-789. <http://dx.doi.org/10.1037/pspp000089>
- Rosander, P., & Backstrom, M. (2014). Personality traits measured at baseline can predict academic performance in upper secondary school three years later. *Scandinavian Journal of Psychology*, 55, 611-618. DOI: 10.1111/sjop.12165
- Rosito, A, C. (2018). Exploration of the Big Five Personality Traits and its Effect on Academic Achievement. *Journal of Educational & Counseling Psychology*, 4(2), 6-13. DOI: <http://dx.doi.org/10.26858/jpkk.v4i1.3250>
- Sidabutar, M., Aidilisyah, M, R., Aulia, Y, K., Umari, N, I., Khairi, F, A., Usman, A., & Altania, E. (2020). The Effect of Learning Motivation on Student Academic Achievement. *Epistema Journal*, 1(2), 117-125. <doi.org/10.21831/ep.v1i2.34996>
- Tulung, J, M., Manoppo, F., Lestuny, Z., & Martoyo, M, D. (2022). The Influence of Neurotic Personality on Students' Christian Education Motivation and Learning Achievement. *Scientific Journal of Wahana Pendidikan*, 8(8), 350-359. <https://jurnal.peneliti.net/index.php/JIWP/article/view/2599>