Research Paper

The Effect of the Growth Mindset and Campus Environment on Cadet Academic Performance

Juliandri Hasnur[1]*, Elfira Wirza[1], Langandriansyah Dwi Yatno[1]
[1] Politeknik Pelayaran Sumatera Barat, Indonesia

Received : November 17, 2024	Revised : December 17, 2024	Accepted : February 15, 2025	Online : February 28, 2025

Abstract

Cadets' academic performance is commonly influenced by internal and external factors. The internal factor that mostly influences cadets' academic performance is growth mindset, meanwhile the external factor is campus environment. The purpose of this study was to find out the effect of growth mindset and campus environment on cadets' academic performance. This study is a quantitative study with an ex-post facto method. The research instrument was a questionnaire given to 100 participants. The data analysis technique used multiple linear analysis by using SPSS application. The results of the study showed that there was a positive effect of growth mindset and campus environment on cadets' academic performance. From the results of this study, it can be recommended that in order to improve cadets' academic performance, the learning curriculum must be able to develop cadets' thinking skills, and the campus environment must be conducive and supportive. Furthermore, institutions are advised to organize course or training programs that focus on developing cadets' thinking skills, so that cadets can be more proactive in learning activities and have growth mindset for the future. Although this study has been conducted optimally, there are several limitations that can be used as recommendations for future research. This study used a quantitative approach, further researchers are advised to use a qualitative or mix-method approach to explore more deeply the relationship between these three variables. In addition, further research needs to consider other factors that influence cadets' academic performance, such as intrinsic motivation, teaching quality, and family support.

Keywords *academic performance; growth mindset; campus environment.*

INTRODUCTION

Educational institutions can achieve higher educational goals by fulfilling Key Performance Indicators (KPI) and forming future generations who are ready to face global challenges and changes (Alam et al., 2024). Therefore, educational institutions must look at indicators that measure the success of their programs. One of the main indicators of educational success is academic performance, which is often the focus of leaders, educators, parents, and students (Zhang et al., 2023). Academic performance not only shows that someone understands and masters the subject matter but also builds critical skills that are needed to face difficulties and solve problems in the real life and in the future (Maniriho, 2024). Students who have good academic performance can find many opportunities, such as continuing their education to a higher level or easily entering the workforce. Academic achievement can increase students' self-confidence and encourage them to continue learning effectively (Martin et al., 2022). In this context, it is crucial to understand the crucial role of academic performance in shaping learners' future.

Academic performance is a measure of students' learning outcomes in each course in a certain period, which is measured through examination scores, assignment scores, and other performances. Academic performance includes the cognitive, affective, psychomotor, motivational, engagement, and discipline components of students' learning process (Kocsis and Molnár, 2024). Academic performance is often used as a measure of how well the education system works in an institution through students' achievements (Fitriani, 2024). Academic performance is also used as

Corresponding author's email: juliandosenpoltekpel@gmail.com

a basis for making decisions about providing scholarships, accepting new students, and classifying students into advanced programs (Aulia et al., 2024).

Table 1. Academic Performance Data of Cadets in Batch VIII of the Third Semester

AKT	MK	MK	MK	MK	MK	MK	MK	MK	MK	MK
8	BP	IK	HM	BP	MT	MP	OP	LG	MK	ST
TH	70	72	70	67	68	70	68	70	65	67
UTS	68	65	70	65	70	65	65	60	67	65
UAS	67	68	68	65	65	67	68	65	67	65
RT	68.33	68.33	69.33	65.67	67.67	67.33	67.00	65.00	66.33	65.67

Source: Initial Research Data

The table above shows the cadets' academic performance for ten courses based on the scores of daily assignments, mid-semester examinations (UTS), and final semester examinations (UAS). From these data, it can be concluded that the cadets' academic performance in each course is still below the minimum completion criteria; that is 75. Therefore, it is necessary to identify the factors that can influence cadets' academic performance.

Many interrelated factors influence students' academic performance. How well students understand and apply knowledge is influenced by individual factors such as cognitive ability, motivation, and discipline (Maniriho 2024). The academic results of students who are highly motivated and able to manage their time better tend to be better. Students can also become more involved in lessons through the support of family and a positive social environment (Bentsi-Enchill 2024). In addition, students' socioeconomic conditions and mental health have a significant impact on their academic performance. Students from families with good economic support usually have greater access to educational resources and better mental health, such as enhanced self-confidence and emotional stability. It helps students focus and achieve better academic performance (Kocsis & Molnár, 2024).

The two main categories that influence students' academic performance are internal and external factors. Internal factors come from within the student, including cognitive ability, which reflects how well students understand, analyze, and apply knowledge (Chew et al., 2021). The next internal factor is time management, that is, how students organize their sleep schedules and task priorities (Mao et al., 2022). In addition, self-confidence affects students' participation and performance in school (Lassen et al., 2024). The motivation or a conscious desire to participate in academic activities also affects students' academic performance (Borentain et al. 2021). Then, external factors that come from outside the student include family support, learning environment, campus environment, which includes positive facilities and culture, and social relationships with school friends and lecturers (Setiawan et al., 2018).

Several relevant previous studies are the basis of this study. First, Almulla (2023) investigated the influence of critical thinking patterns and students' creativity on problem-solving skills. Second, Bonsaksen et al. (2024), who focused on assessing learning environment factors as predictors of students' average exam scores. Third, research by Mahama et al. (2024) focuses on the relationship between mindfulness and academic resilience and student motivation. Fourth, research by Campbell et al. (2021), which focused on the influence of growth mindset patterns on students' learning motivation. Fifth, research from Meierdirk and Fleischer (2022), focusing on the relationship between mindset, resilience, and academic achievement. Sixth, Bonsaksen et al. (2024) focused on the relationship between learning environment factors and learning outcomes.

From these previous studies, we conclude that students' mindsets and environments influence their learning outcomes. Previous studies have focused on the influence of one dependent variable with one independent variable only, whereas this study broadens its scope by examining the simultaneous influence between two dependent variables with one independent variable. Thus, the novelty of this study is to examine the effect of both variables; growth mindset and campus environment on cadets' academic performance using a quantitative research approach with multiple linear regression analysis methods.

From the above explanation, the purpose of this study was to determine the effect of growth mindset and campus environment on cadets' academic performance.

LITERATURE REVIEW

Growth Mindset

A growth mindset can be interpreted as a belief in oneself that one's qualities can be developed and trained through effort, strategy, and help from others by maximizing one's capacity (Sellon et al., 2023). A growth mindset is also known as a paradox mindset, which is a mindset that produces a tough (positive) attitude in various situations and conditions. By that kind of mindset, cadets can change tension into opportunities to learn productively and optimally (Assen & Caniëls, 2022). According to Amaro and Scheepers (2023), this paradox mindset is intended for everyone in organizations or institutions, so everyone has a strategy to manage tension and turn it into positive thinking. By this mindset, cadets can adapt well to the learning process and campus environment. A growth mindset is characterized by a person's ability to accept contradictions, see the positive side of each other's perspectives, think integratively, and reflect the thoughts of a leader (Kangas et al., 2023). Cadets with a growth mindset will easily train their abilities and skills in learning to reach achievements and easily develop an entrepreneurial attitude to be individuals who are competent for the workplace and industry (Phillips et al., 2024).

Campus Environment

The campus environment is a learning environment that includes all concrete or abstract forms that support the learning process (Thygesen et al., 2020). The campus environment, which consists of inanimate objects, is greatly influenced by the human resources in it (Haque et al., 2023). The campus environment includes all humans and facilities available on campus, including those provided intentionally and unintentionally (Ebekozien & Aigbavboa, 2022). According to Ebekozien et al. (2023), the campus environment is in the form of educational, training, and learning programs designed to enrich knowledge, develop skills, and improve cadets' abilities. In general, the campus environment can be divided into a physical environment that includes space, facilities, means, as well as infrastructure, and a virtual (digital) environment, which is a learning space using information and communication technology (Lindeberg et al., 2023).

Academic Performance of Cadets

Academic performance is the main indicator of the success of cadets and educational institutions (Kallio et al., 2021). Cadets' academic performance is indicated by cadets' learning achievements during a certain period that can be measured quantitatively and qualitatively (Guthrie et al., 2024). Cadets' academic performance is measured by using standard measuring instruments and measurement methods that can be developed by each institution according to the competencies expected by the workplace (Guarini et al., 2020). Cadets' academic performance generally refers to active rather than passive abilities demonstrated by cadets through real practice in daily learning (Pilotti et al., 2022). Growth mindset and high motivation are the main drivers

that motivate cadets to produce satisfactory academic performance (Cheng & Nguyen, 2024). Based on the literature reviewed above, the hypotheses of this research are as follows:
H1 = There is a positive effect of growth mindset on cadets' academic performance.
H2 = There is a positive effect of campus environment on cadets' academic performance.
H3 = There is a positive effect of growth mindset and campus environment on cadets' academic performance.

RESEARCH METHOD

This research is quantitative with an ex-post facto method. The research design is shown in Figure 1.

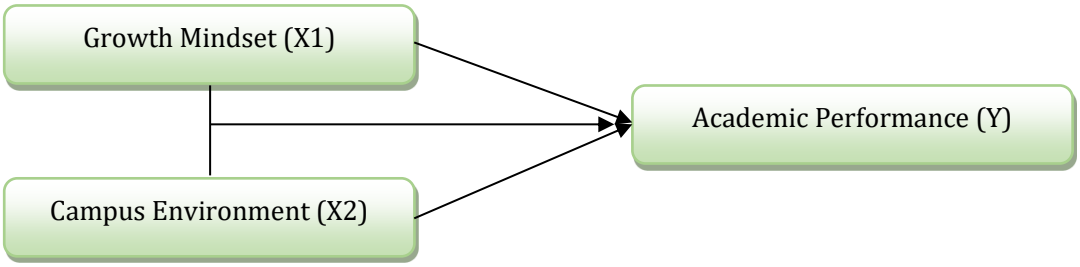

Figure 1. Ex-Post Facto Method Design

The research location is the Merchant Marine Polytechnic, West Sumatera. This research was conducted for 4 months, from July to October 2024. The subjects of this research were all employees of the Merchant Marine Polytechnic of West Sumatera, with 154 participants. The researchers use employees as respondents instead of cadets for several reasons. First, academic performance refers to the quality of the cadets (hard skills and soft skills), which is better known by employees. Considering that all employees at West Sumatera Merchant Marine Polytechnic are cadet tutors, mentors, and educators, it is more appropriate to fill out this questionnaire by employees (Bedford et al., 2023). Second, West Sumatera Merchant Marine Polytechnic is a part of vocational higher education under the Ministry of Transportation (Abduh et al., 2022), and it has standard regulations for learning activities (Mashartanto et al., 2024) and standard instruments to evaluate cadets' academic performance, which is known better by all employees (Irwan et al., 2024).

The sample selection was carried out using the total sampling technique to make the research results more generalizable and valid. The research instrument was a questionnaire which can be seen in Table 2.

Table 2. Questionnaire

No.	Variable	Indicator	Description	Code
1	Academic performance (AP) Developed from previous studies (Ayoub/Al-Salim & Aladwan, 2021;	Academic Interest	Cadets are interested in theoretical learning	AP 1
			Cadets are interested in discussions	AP 2
			Cadets are interested in student-centered learning	AP 3
			Cadets are interested in practical learning	AP 4
			Cadets are interested in laboratory learning	AP 5
			Cadets are interested in teacher-centered learning	AP 6
		Learning Attitude	Cadets show curiosity in learning	AP 7
			Cadets summarize learning outcomes	AP 8
			Cadets are enthusiastic about learning.	AP 9

No.	Variable	Indicator	Description	Code
	AlZahrani & Oommen, 2023)		Cadets feel at home in class	AP 10
			Cadets perform assignments well	AP 11
			Cadets take exams independently	AP 12
		Quality of Learning	The Cadets found it easy to understand the lecturer's teaching	AP 13
			I feel that I can explain concepts clearly and easily to cadets.	AP 14
			I use various teaching methods to meet cadets' learning needs.	AP 15
			I provide constructive feedback to cadets on assignments and exams.	AP 16
			I feel that the cadets show interest and enthusiasm for the material being taught.	AP 17
			The assessment process should be fair and transparent to the cadets.	AP 18
			The teaching materials and resources provided (books, articles, aids) are relevant and support the cadets' learning process.	AP 19
		Expectation	I believe that all cadets can achieve the learning objectives set	AP 20
			I expect cadets to actively participate in class discussions and activities.	AP 21
			I expect cadets to show improvement in their academic performance throughout the semester.	AP 22
			I expect cadets to communicate openly about their difficulties in understanding the material.	AP 23
			I expect cadets to take initiative in their own learning processes.	AP 24
			I expect sufficient institutional support to assist the teaching process.	AP 25
		Motivation	I feel that the cadets in this class are highly motivated to learn.	AP 26
			My cadets show strong curiosity about the material being taught	AP 27
			The teaching method successfully increased the cadets' motivation to learn	AP 28
			I believe that the feedback I provide can increase the motivation of cadets.	AP 29
			The classroom environment that I created supports cadets' motivation to learn.	AP 30
			I encourage cadets to be actively involved in the learning process to increase their motivation.	AP 31
			I believe that emotional support can	AP 32

No.	Variable	Indicator	Description	Code
			contribute to the motivation of cadets.	
2	Growth Mindset (GM) Developed from previous studies (Sum et al., 2022; Jorif & Burleigh, 2022)	Blame attribution	I believe that cadets are responsible for their own academic success.	GM 1
			I believe that peer support can reduce the mistakes that cadets make	GM 2
			I feel that my teaching method can affect cadets' learning outcomes.	GM 3
			I believe that cadets should learn from their mistakes to improve.	GM 4
			I encourage cadets to take initiative in their learning processes	GM 5
			I believe it is important to create an environment where cadets feel safe to discuss their mistakes.	GM 6
		Outcome expectancy	I feel that cadets understand the relationship between their efforts and expected results.	GM 7
			I believe that improving cadets' motivation will have a positive impact on their motivation.	GM 8
			I strive to provide sufficient support to cadets to help them achieve their expected results.	GM 9
			I believe that cadets with high confidence tend to achieve better results.	GM 10
			I feel that cadets' physical and emotional conditions can affect their academic outcomes.	GM 11
			I believe that cadets who feel in control of their learning process are more optimistic about the outcomes they will achieve.	GM 12
		Willingness to coach	I feel ready to provide guidance and support to cadets who need it.	GM 13
			I believe that providing guidance to cadets is my responsibility	GM 14
			I try to use different approaches to provide guidance according to the needs of the cadets.	GM 15
			I encourage cadets to discuss the challenges they face in learning.	GM 15
			I am open to feedback from cadets about my teaching.	GM 16
			I provide emotional support to help cadets feel more comfortable learning.	GM 17
			I will guide cadets to achieve optimal academic performance.	GM 18

No.	Variable	Indicator	Description	Code
3	Campus Environment (CE) Developed from previous studies (Karhapää et al., 2024; Manaig et al., 2024)	Healthy environment	The classroom is well-ventilated and well-lit.	CE 1
			I feel that the learning environment supports cadets' mental health.	CE 2
			I believe that physical activities, such as sports, are important for cadets' well-being.	CE 3
			The classroom environment supports healthy social relationships among cadets.	CE 4
			I educate cadets about the importance of maintaining physical and mental health.	CE 5
			I believe that cadets should maintain a balance between their studies and their personal lives.	CE 6
		Healthy people	Cadets demonstrate high-level awareness of physical and mental health	CE 7
			I feel that cadets are actively involved in health programs offered by the institution.	CE 8
			I feel that the learning environment supports cadets' mental health.	CE 9
			I encourage cadets to maintain healthy and balanced diets.	CE 10
			I feel that the health programs in the institution are effective in improving the well-being of cadets.	CE 11
			I believe it is important for cadets to maintain a balance between academic work and personal health.	CE 12
		Health literacy and health Behaviors	Cadets can explain the importance of health in everyday life.	CE 13
			Cadets can access and critically evaluate health information sources.	CE 14
			Cadets should demonstrate awareness of the importance of disease prevention and health	CE 15
			I strive to integrate health literacy instruction into the courses I teach	CE 16
			I believe that peer support contributes to cadets' health behaviors.	CE 17
			I encourage cadets to become involved in health-related extracurricular activities.	CE 18

Source: Research Trial Questionnaire

The questionnaire was administered to 30 employees outside the sample. This aims to ensure the validity and reliability of the questionnaire before it is given to the research sample. The research questionnaire was distributed directly to the employees outside working hours. The data analysis technique used multiple linear analyses with the help of the SPSS software.

FINDINGS AND DISCUSSION

Prior to inclusion in the research sample, validity and reliability tests were conducted on 30 employees. The r-table value for a sample size of 30 people was 0.3610 (df (N-2) = 28, α = 0.05). The questionnaire item is valid if the r-calculated value is greater than the r-table. The questionnaire item is considered reliable if the Cronbach's alpha value is greater than 0.06. The results of the validity and reliability tests of the questionnaire using SPSS can be seen in table 3. Next, the number of questionnaires used for the research sample is shown in Table 4.

Table 3. Validity and Reliability Test Results

Variable	Validity Test Results			Reliability Test Results	
	Indicator	Pearson Correlation	Description	Cronbach's Alpha	Description
Growth mindset (X1)	GM 1	0.44	Valid		
	GM 2	0.967	Valid		
	GM 3	0.978	Valid		
	GM 4	0.963	Valid		
	GM 5	0.826	Valid		
	GM 6	0.84	Valid		
	GM 7	0.916	Valid		
	GM 8	0.981	Valid		
	GM 9	0.963	Valid	0.987	Reliable
	GM 10	0.978	Valid		
	GM 11	0.978	Valid		
	GM 12	0.84	Valid		
	GM 13	0.963	Valid		
	GM 14	0.978	Valid		
	GM 15	0.963	Valid		
	GM 16	0.826	Valid		
	GM 17	0.963	Valid		
	GM 18	0.959	Valid		
Campus Environment (X2)	CE 1	0.745	Valid		
	CE 2	0.828	Valid		
	CE 3	0.889	Valid		
	CE 4	0.906	Valid		
	CE 5	0.859	Valid		
	CE 6	0.851	Valid		
	CE 7	0.64	Valid		
	CE 8	0.927	Valid		
	CE 9	0.906	Valid		
	CE 10	0.745	Valid		
	CE 11	0.859	Valid		
	CE 12	0.927	Valid	0.987	Reliable
	CE 13	0.927	Valid		
	CE 14	0.925	Valid		
	CE 15	0.927	Valid		
	CE 16	0.941	Valid		

Variable	Validity Test Results			Reliability Test Results	
	Indicator	Pearson Correlation	Description	Cronbach's Alpha	Description
	CE 17	0.64	Valid		
	CE 18	0.925	Valid		
Academic performance (Y)	AP 1	0.959	Valid		
	AP 2	0.946	Valid		
	AP 3	0.836	Valid		
	AP 4	0.944	Valid		
	AP 5	0.882	Valid		
	AP 6	0.958	Valid		
	AP 7	0.926	Valid		
	AP 8	0.959	Valid		
	AP 9	0.000	Not Valid		
	AP 10	0.836	Valid		
	AP 11	0.968	Valid		
	AP 12	0.000	Not Valid		
	AP 13	0.946	Valid		
	AP 14	0.881	Valid		
	AP 15	0.959	Valid		
	AP 16	0.958	Valid	0.99	Reliable
	AP 17	0.881	Valid		
	AP 18	0.836	Valid		
	AP 19	0.881	Valid		
	AP 20	0.959	Valid		
	AP 21	0.958	Valid		
	AP 22	0.946	Valid		
	AP 23	0.959	Valid		
	AP 24	0.946	Valid		
	AP 25	0.958	Valid		
	AP 26	0.881	Valid		
	AP 27	0.926	Valid		
	AP 28	0.926	Valid		
	AP 29	0.829	Valid		
	AP 30	0.968	Valid		
	AP 31	0.81	Valid		
	AP 32	0.491	Valid		

Source: Research Data

Table 4. Valid Questionnaire for Instrumentation

No.	Variable	Trial Questionnaire	Research Questionnaire
1	Growth mindset (X1)	18	18
2	Environment (X2)	18	18
3	Academic performance (Y)	32	30

Source: Research Data

Prerequisite Test Results

The prerequisite tests in this study include normality, multicollinearity, and heteroscedasticity tests. The results of the normality test are shown in Figures 2 and 3.

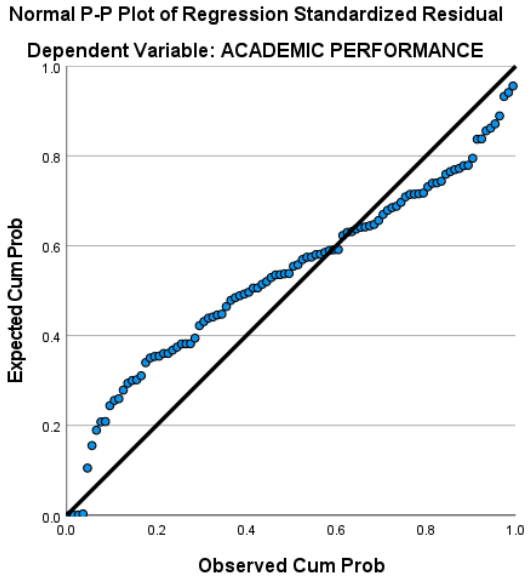

Figure 2. Normality Test from the PP Plot

The normality data for the three variables can be seen from the plot that follows the diagonal line. Thus, the data for the three research variables are distributed normally. In addition, the normality of the data can be seen from the histogram in Figure 3.

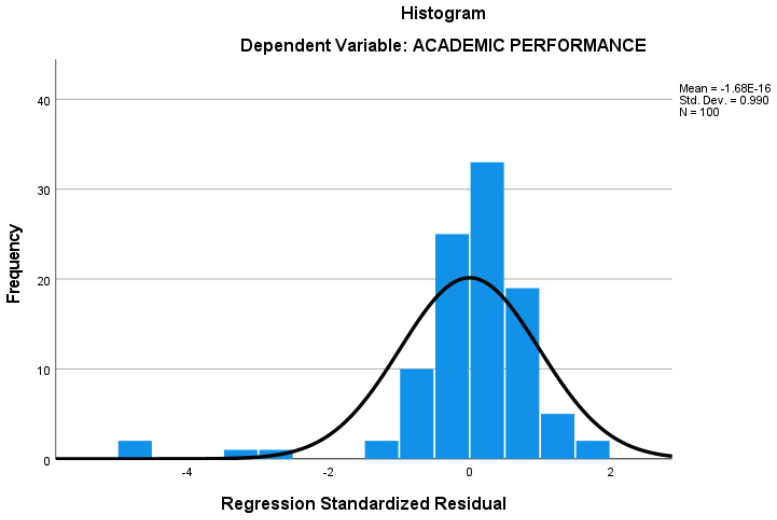

Figure 3. Normality Test from Histogram

The multicollinearity test was determined by the VIF and tolerance value in the SPSS results. If the VIF value is less than 10 and the tolerance value is greater than 0.1, then there is no multicollinearity. The prerequisite for multiple linear analysis is that no multicollinearity exists. It can be seen from the table 4.

Table 4. Multicollinearity Test Results

No.	Independent Variable	VIF	Tolerance	Result
1	Growth mindset (X1)	1.055	0.948	No multicollinearity

2	Environment (X2)	1.055	0.948	No multicollinearity

Furthermore, the prerequisite test can be continued with the heteroscedasticity test. The results are shown in Figure 4.

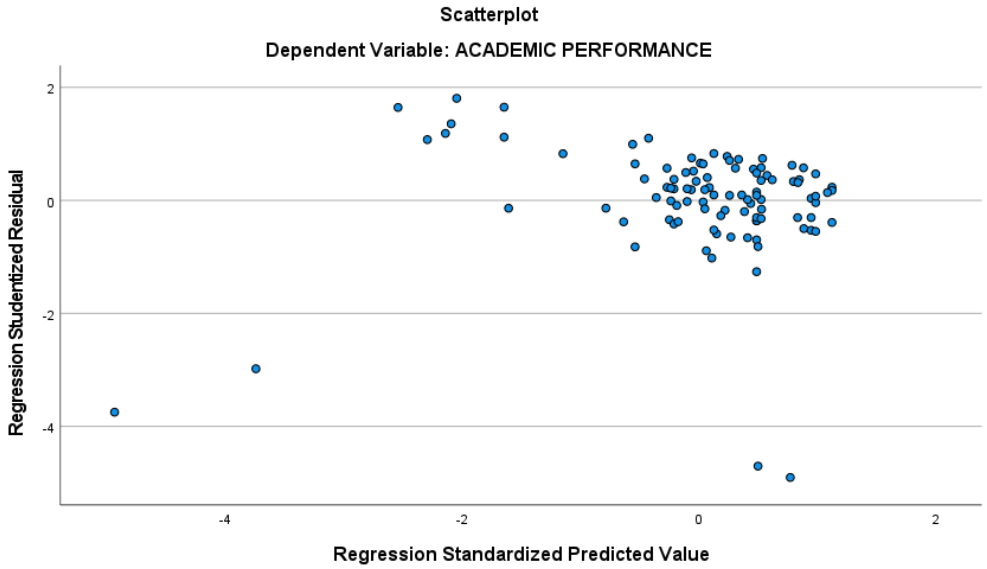

Figure 4. Heteroscedasticity Scatterplot

From Figure 4, it can be described that the points are spread randomly and do not form any pattern or chart. This means that the research variables data have no heteroscedasticity. The prerequisite for the multiple linear analysis test is that the research data are not heteroscedastic. Because the prerequisite test has been met, a multiple linear analysis test can be performed.

Hypothesis 1 and Hypothesis 2 Test Results

Hypothesis 1 of this study is to determine whether there is a positive effect of the gowth mindset on cadets' academic performance. Then, hypothesis 2 is to determine whether there is a positive effect of the campus environment on cadets' academic performance. The research hypothesis is accepted if the t-count is greater than the t-table. The t-table value for a research sample of 100 participants is 1.661. The results of Hypothesis 1 (H1) and Hypothesis 2 (H2) tests can be seen in table 5.

Table 5. Hypothesis 1 and 2

No.	Independent Variable	t-count	t-table	Result
1	Growth mindset (X1)	2.721	1,661	Accepted H1
2	Environment (X2)	3.229	1,661	Accepted H2

Source: Research Data

Table 5 explains that Hypothesis 1 (H1) is accepted, which means there is a positive effect of cadets' growth mindset on their academic performance. Then, Hypothesis 2 (H2) is also accepted; in other words, there is a positive effect of the campus environment on cadets' academic performance.

Hypothesis 3: Test Results

Hypothesis 3 of the study is to determine whether there is a simultaneous positive effect of

cadets' growth mindset and campus environment on their academic performance. Hypothesis 3 (H3) was determined using the F test. The research hypothesis is accepted if the F-value is greater than the F-table. The F-table value for a sample of 100 people was 3.92. The results of the F test can be seen in Table 6.

Table 6. F-Test Result

F-count	F-table	Result
11.519	3,92	Accepted H3

Source: Research Data

Table 6 explains that Hypothesis 3 (H3) is accepted, which means that there is a simultaneous positive effect of growth mindset and campus environment on cadets' academic performance.

Discussion

The results of Hypothesis 1 (H1) indicate that growth mindset significantly affects cadets' academic performance. This growth mindset theory was introduced by Caror Dweck, who defined it as a belief in a person's abilities that can develop through effort and the right strategies from inside (Yuan et al., 2024). However, this growth mindset can also develop with the help of others. Growth mindset is included in the psychological aspect of a student that will affect self-progress and self-development in academic performance (Sousa & Clark, 2024). Another opinion from Cherewick et al. (2023) stated that the development of female cadets' mindsets differs from that of male cadets. This agrees with Lestari et al. (2024) opinion that growth mindset tends to be found in male cadets compared to female cadets. Therefore, male cadets' academic performance should be superior to female cadets. This is certainly a concern for lecturers and educators in the future in arranging learning strategies for them.

According to Wingen et al. (2024), a growth mindset has a positive effect on training oneself in terms of improving learning outcomes and achieving all desires. A person tends to be more resilient in facing challenges, not giving up easily, and able to rise from failure with a good growth mindset (Suharmanto et al., 2024). Furthermore, students with a consistent growth mindset will continue to be motivated to improve their academic achievements and have a competitive spirit (Kjærgaard et al., 2024). Motivation is an implementation of developing thinking and growth mindset that has a significant effect on cadets' academic performance. In addition, cadets with a growth mindset have strategies to manage stress (coping stress) (Ridwan, et al., 2021), so they can handle their academic stress well. By developing a growth mindset, cadets will have strong self-efficacy (Irwan et al., 2024), and they will not easily be distracted by useless and negative activities on campus. Thus, growth mindset develops cadets' psychological well-being (Aboh et al., 2024) so they will not have mental health issues.

Furthermore, from the Hypothesis 2 (H2), it can be concluded that the campus environment significantly affects academic performance. In line with Liu et al. (2022) explained that the campus environment, which includes the environment inside and outside the classroom, has an impact on cadets' psychology in learning to improve their academic achievement. A conducive and supportive environment will encourage cadets to be active in learning to achieve good academic performance. Then the same thing was also stated by Thamrin et al. (2023), who stated that independent learning will significantly affect cadets' academic progress, so that when the learning environment supports cadets to learn independently, then cadets' self-confidence and seriousness in learning will develop. This will certainly contribute directly to academic outcomes, academic efficacy, academic engagement, academic performance, and academic achievement (Luo et al., 2023). A campus environment that uses digital technology tools also greatly supports cadets' academic performance

(Limniou et al., 2020). Thus, a conducive learning environment that follows continuous changes in the education system can support cadets' academic success (Calhoun & Stroter, 2024). In other words, a strategic and effective campus environment will motivate cadets to learn and will impact academic performance.

From Hypothesis 3 (H3), it is concluded that there is a simultaneous positive effect of growth mindset and the campus environment on cadets' academic performance. A similar result arises from Alhaza et al. (2021) statement that cadets' mindsets are related to services and academic environments that influence university performance. One of the factors that influences university performance is academic achievement of the cadets. The campus atmosphere has a significant effect on the academic achievements of cadets (Berhany & Sewagegn, 2024). Furthermore, cadets who have a growth mindset have a strong motivation to learn and self-discipline in all activities, including academic activities, to maximize their academic performance. A growth mindset shows a high level of persistence among cadets, which affects their academic improvement (Zhao et al., 2023). The internal environment, such as family support, as well as the external environment, such as peer support, lecturers, and a positive and humanistic campus culture will also make it easy for the cadets to achieve optimal academic performance. Public space and campus creativity can positively influence cadets' learning motivation so that their academic performance will increase (Soares et al., 2022). Self-motivation, as part of a cadet's growth mindset, also has a positive effect on their academic performance (Corpuz et al., 2022).

CONCLUSIONS

The results of this study indicate that growth mindset and the campus environment have a significant effect on cadets' academic performance. From the results of this study, it can be recommended that cadets should be encouraged to develop a growth mindset through courses and training programs that focus on developing this mindset. In this way, they will be more motivated to face academic challenges. The growth mindsets needed to enhance cadets' academic performance are adaptability, continuous learning and improvements, resilience, and practical problem solving. In addition, institutions must create a positive learning environment with social support from lecturers, parents and peers. This will make students feel more comfortable and inspired while studying. The campus environment needed to enhance cadets' academic performance is a conducive theoretical and practical learning environment and a humanist and green campus. To improve student academic performance, the learning curriculum must be able to develop cadets' growth mindsets and must be able to create a competency-oriented learning environment.

LIMITATION & FURTHER RESEARCH

Although this study was carried out optimally, several limitations are noted. The independent variables of the study focused only on growth mindset and the campus environment; in fact, other independent variables such as fixed mindset, internal environment, academic environment, and class environment can be studied more deeply. Further researchers are recommended to study the relationship between other independent variables and dependent variables such as academic performance, cadets' competency, graduate learning outcomes (CPL), and institutional performance**.**

REFERENCES

Abduh, M., Hasnur, J., & Siska, S. Y. (2022). The effect of maritime English vocabulary for beginners module on the vocabulary learning outcomes. *Jurnal Pendidikan Vokasi, 12*(2), 117–129. https://doi.org/10.21831/jpv.v12i2.49033

Aboh, E. E., Saaondo, P., & Haladu, A. (2024). Operational Stress, Coping Strategies and Psychological Well- Being Among Paramilitary Officers in the Bade Local Government Area of Yobe State. *Organization and Human Capital Development*, *3*(2), 71–83. https://doi.org/10.31098/orcadev.v3i2.2431

Alam, M. J., Ullah, M. S., Islam, M., & Chowdhury, T. A. (2024). Human resource management practices and employee engagement: The moderating effect of supervisory role. *Powerful Business and Management, 11*(1). https://doi.org/10.1080/23311975.2024.2318802

Alhaza, K., Abdel-Salam, A. G., Mollazehi, M. D., Ismail, R. M., Bensaid, A., Johnson, C., Al-Tameemi, R. A. N., Hasan, M. A., & Romanowski, M. H. (2021). Factors affecting university image among undergraduate students: The case study of Qatar University. *Powerful Education, 8*(1). https://doi.org/10.1080/2331186X.2021.1977106

Almulla, M. A. (2023). Constructivism learning theory: A paradigm for students' critical thinking, creativity, and problem solving to affect academic performance in higher education. *Powerful Education, 10*(1). https://doi.org/10.1080/2331186X.2023.2172929

AlZahrani, W. I., & Oommen, A. (2023). Role of vitamin D in the academic performance of health sciences students in Saudi Arabia. *Arab Gulf Journal of Scientific Research, 41*(1), 40–47. https://doi.org/10.1108/AGJSR-04-2022-0028

Amaro, L., & Scheepers, C. B. (2023). Exploring the nexus between microlevel and contextual influencers on women leaders' paradox mindset. *Gender in Management, 38*(1), 36–56. https://doi.org/10.1108/GM-11-2021-0335

van Assen, M. F., & Caniëls, M. C. J. (2022). Economic and social LMX and innovative work behavior: The moderating effect of paradox mindset. *European Journal of Innovation Management, 25*(6), 1057–1075. https://doi.org/10.1108/EJIM-05-2022-0234

Aulia, A. N., Hermawan, I., & Purnamasari, E. (2024). Enhancing Organizational Performance: Can Innovative Millennial Entrepreneurship and Business Continuity Take on A Mediating Role?. Organization and Human Capital Development, 3(2), 84–96. https://doi.org/10.31098/orcadev.v3i2.2419

Ayoub/Al-Salim, M. I., & Aladwan, K. (2021). The relationship between academic integrity of online university students and its effects on academic performance and learning quality. *Journal of Ethics in Entrepreneurship and Technology, 1*(1), 43–60. https://doi.org/10.1108/jeet-02-2021-0009

Bedford, D. S., Granlund, M., & Lukka, K. (2023). Safeguarding the unknown: Performance measurement, academic agency and the meaning of research quality in practice. *Accounting, Auditing and Accountability Journal, 36*(9), 281–308. https://doi.org/10.1108/AAAJ-08-2022-5986

Bentsi-Enchill, F. (2024). Teachers' role and factors hindering Ghanaian high school students' academic performance using Walberg's educational productivity. *Powerful Education, 11*(1). https://doi.org/10.1080/2331186X.2024.2393924

Berhanu, K. Z., & Sewagegn, A. A. (2024). The role of perceived campus climate in students' academic achievements as mediated by students' engagement in higher education institutions. *Powerful Education, 11*(1). https://doi.org/10.1080/2331186X.2024.2377839

Bonsaksen, T., Tannoubi, A., Stigen, L., Gramstad, A., Carstensen, T., & Mørk, G. (2024). Study approaches mediate associations between learning environment and academic performance. *Scandinavian Journal of Occupational Therapy, 31*(1). https://doi.org/10.1080/11038128.2024.2385043

Borentain, S., Williamson, D., Turkoz, I., Popova, V., McCall, W. V., Mathews, M., & Wiegand, F. (2021). Effect of sleep disturbance on efficacy of esketamine in treatment-resistant depression:

Findings from randomized controlled trials. *Neuropsychiatric Disease and Treatment, 17*, 3459–3470. https://doi.org/10.2147/NDT.S339090

Calhoun, C. C., & Stroter, A. (2024). A quantitative correlation study of demographic predictors of academic achievement among middle school victims of bullying. *Pastoral Care in Education, 00*(00), 1–26. https://doi.org/10.1080/02643944.2024.2403659

Campbell, A. L., Direito, I., & Mokhithi, M. (2021). Developing growth mindsets in engineering students: A systematic literature review of interventions. *European Journal of Engineering Education, 46*(4), 503–527. https://doi.org/10.1080/03043797.2021.1903835

Cheng, W., & Nguyen, P. N. T. (2024). Academic motivations and the risk of not in employment, education or training: University and vocational college undergraduates comparison. *Education and Training, 66*(10), 91–105. https://doi.org/10.1108/ET-05-2024-0203

Cherewick, M., Hipp, E., Njau, P., & Dahl, R. E. (2023). Growth mindset, persistence, and self-efficacy in early adolescents: Associations with depression, anxiety, and externalizing behaviors. *Global Public Health, 18*(1). https://doi.org/10.1080/17441692.2023.2213300

Chew, Q. H., Tan, E., Sum, M. Y., & Sim, K. (2021). Inter-relationships between perception of educational environment and learning processes within medical undergraduate psychiatry teaching: A mediational analysis. *Medical Education Online, 26*(1). https://doi.org/10.1080/10872981.2021.1998944

Corpuz, J. T., Peña, G. S., & Baconguis, R. D. T. (2022). Achievement, affiliation, power and academic performance of business management students of a state university in Cavite, Philippines. *Powerful Social Sciences, 8*(1). https://doi.org/10.1080/23311886.2022.2060538

Ebekozien, A., & Aigbavboa, C. (2022). Evaluation of built environment programmes accreditation in the 21st-century education system in Nigeria: Stakeholders' perspective. *International Journal of Building Pathology and Adaptation, 41*(6), 102–118. https://doi.org/10.1108/IJBPA-02-2022-0027

Ebekozien, A., Aigbavboa, C., Ikuabe, M., & Thwala, W. D. (2023). The built environment craftmanship in higher education institutions: Issues and prospects from stakeholders' perception. *Education and Training, 65*(3), 492–509. https://doi.org/10.1108/ET-03-2022-0086

Fitriani, E. (2024). The impact of student attachment on university reputation: An analysis of perceived quality and perceived value. International Journal of Marketing and Digital Creative, 2(2). https://doi.org/10.31098/ijmadic.v2i2.2328

Guarini, E., Magli, F., & Francesconi, A. (2020). Academic logics in changing performance measurement systems: An exploration in a university setting. *Qualitative Research in Accounting and Management, 17*(1), 109–142. https://doi.org/10.1108/QRAM-06-2019-0076

Guthrie, J., Manes-Rossi, F., Levy Orelli, R., & Sforza, V. (2024). Performance management and measurement impacts on universities: (Re)Viewing the past, present and future. *Journal of Public Budgeting, Accounting and Financial Management, 36*(6), 1–25. https://doi.org/10.1108/JPBAFM-10-2023-0176

Haque, M. N., Abtahee, M., Islam, A. A., & Sadiq, M. A. (2023). Students' perception of environmental sustainability (ES) exercises at higher education institutions (HEIs) in Bangladesh. *Frontiers in Engineering and Built Environment, 3*(3), 167–179. https://doi.org/10.1108/febe-07-2022-0030

Irwan, I., Putra, R. W., Erlinda, N., & Andini, N. F. (2024). Influence of parenting patterns and self-efficacy on the leadership of cadet regiment at Merchant Marine Polytechnic of West

Sumatera. *International Journal of Islamic Educational Psychology, 5*(1), 86–106. https://doi.org/10.18196/ijiep.v5i1.22134

Irwan, R. W. P., & Devin, H. (2024). Development of operational level practical test instrument by using competency-based assessment model. *Cetta: Jurnal Ilmu Pendidikan, 7*(4), 69–80. https://doi.org/10.37329/cetta.v7i4.3665

Jorif, M., & Burleigh, C. (2022). Secondary teachers' perspectives on sustaining growth mindset concepts in instruction. *Journal of Research in Innovative Teaching and Learning, 15*(1), 23–40. https://doi.org/10.1108/JRIT-04-2020-0020

Kallio, K. M., Kallio, T. J., Grossi, G., & Engblom, J. (2021). Institutional logic and scholars' reactions to performance measurement in universities. *Accounting, Auditing and Accountability Journal, 34*(9), 104–130. https://doi.org/10.1108/AAAJ-03-2018-3400

Kangas, N. M., Kumar, V. K., Moore, B. J., Flickinger, C. A., & Barnett, J. L. (2023). Development of a leadership mindset scale. *Journal of Leadership Education, 22*(1), 77–95. https://doi.org/10.12806/v22/i1/r5

Karhapää, A., Rikala, P., Pöysä-Tarhonen, J., & Hämäläinen, R. (2024). Digital environments as sites for informal workplace learning in knowledge work. *Journal of Workplace Learning, 36*(9), 19–36. https://doi.org/10.1108/JWL-11-2023-0184

Kjærgaard, A., Buhl-Wiggers, J., & Mikkelsen, E. N. (2024). Does gradeless learning affect students' academic performance? A study of effects over time. *Studies in Higher Education, 49*(2), 336–350. https://doi.org/10.1080/03075079.2023.2233007

Kocsis, Á., & Molnár, G. (2024). Factors influencing academic performance and dropout rates in higher education. *Oxford Review of Education, 00*(00), 1–19. https://doi.org/10.1080/03054985.2024.2316616

Lassen, E. R., Lia, S. A., Hjertaas, I., Hjemdal, O., Kennair, L. E. O., Hagen, R., & Solem, S. (2024). Patient motivation and adherence in metacognitive therapy for major depressive disorder: An observational study. *Cognitive Behavior Therapy, 53*(2), 220–234. https://doi.org/10.1080/16506073.2023.2289863

Lestari, S., Adira, N., & Mukminin, G. U. (2024). Eksplorasi growth mindset pada mahasiswa. *Jurnal Psikologi Insight, 8*(1), 73–80. https://doi.org/10.17509/insight.v8i1.68483

Limniou, M., Duret, D., & Hands, C. (2020). Comparisons between three disciplines regarding device usage in a lecture theater, academic performance and learning. *Higher Education Pedagogies, 5*(1), 132–147. https://doi.org/10.1080/23752696.2020.1797522

Lindeberg, P., Saunila, M., Lappalainen, P., Ukko, J., & Rantanen, H. (2023). The relationship between various social work environment elements and hybrid worker well-being. *Facilities, 42*(15–16), 1–16. https://doi.org/10.1108/F-03-2023-0019

Liu, Y., Wang, Y., Liu, R. D., Ding, Y., Wang, J., & Mu, X. (2022). How classroom environment influences academic enjoyment in mathematics among Chinese middle school students: Moderated mediation effect of academic self-concept and academic achievement. *Psychology Research and Behavior Management, 15*, 2035–2048. https://doi.org/10.2147/PRBM.S371092

Luo, Q., Chen, L., Yu, D., & Zhang, K. (2023). The mediating role of learning engagement between self-efficacy and academic achievement among Chinese college students. *Psychology Research and Behavior Management, 16*, 1533–1543. https://doi.org/10.2147/PRBM.S401145

Mahama, I., Amoako, I., Nandzo, A., & Eshun, P. (2024). Academic mindfulness, self-regulated learning and school engagement as predictors of academic resilience among high school students in Ghana. *Powerful Education, 11*(1). https://doi.org/10.1080/2331186X.2024.2403282

Manaig, K. A., Yazon, A. D., Tesoro, J. F. B., Buama, C. A. C., & Sapin, S. B. (2024). Unraveling the connections: Exploring the relationship between teaching effectiveness and academic achievement in blended learning environments. *Advanced Journal of STEM Education, 2*(2), 80-94. https://doi.org/10.31098/ajosed.v2i2.2718

Maniriho, A. (2024). Satisfaction and academic performance of undergraduate economics students. *Powerful Education*, *11*(1). https://doi.org/10.1080/2331186X.2024.2326707

Mao, Y., Xie, B., Chen, B., Cai, Y., Wu, J., Zhang, J., Shao, R., & Li, Y. (2022). Mediating effect of sleep quality on the relationship between electronic screen media use and academic performance among college students. *Nature and Science of Sleep*, 14, 323–334. https://doi.org/10.2147/NSS.S346851

Martin, H., Craigwell, R., & Ramjarrie, K. (2022). Grit, motivational belief, self-regulated learning (SRL), and academic achievement of civil engineering students. *European Journal of Engineering Education*, *47*(4), 535–557. https://doi.org/10.1080/03043797.2021.2021861

Mashartanto, A., Pranata, W., & Siska, S. Y. (2024). Development of learning media maritime English textbook for ratings forming. *JOLLT Journal of Languages and Language Teaching, 12*(3), 1238–1252. https://doi.org/10.33394/jollt.v12i3.11337

Meierdirk, C., & Fleischer, S. (2022). Exploring the mindset and resilience of student teachers. Teacher Development, 26(2), 263–278. https://doi.org/10.1080/13664530.2022.2048687

Phillips, M. D., Nyonna, D. Y., Volker, J. X., Weddington, A. B., & Williams, T. L. (2024). Redesigning the capital budgeting process to support large firm growth: A case for the entrepreneurial mindset. *Journal of Ethics in Entrepreneurship and Technology*, *4(*1), 26–35. https://doi.org/10.1108/jeet-05-2024-0012

Pilotti, M., Alkuhayli, H., & Al Ghazo, R. (2022). Memorization practice and academic success in Saudi undergraduate students. *Learning and Teaching in Higher Education: Gulf Perspectives, 18*(1), 19–31. https://doi.org/10.1108/LTHE-08-2020-0030

Ridwan, M. E., Mashartanto, A. A., & Siska, S. Y. (2021). Strategi coping dalam menghadapi stres pada taruna/i penyusun karya tulis akhir. Jurnal Cakrawala Bahari, 4(1), 23–50. https://doi.org/10.70031/jkb.v4i1.28

Sellon, A., Sunderman, H., & McElravy, L. J. (2023). Transforming leadership education undergraduate advising: Incorporating growth mindset and design thinking. *Journal of Leadership Education, 22*(2), 91–111. https://doi.org/10.12806/V22/I2/A2

Setiawan, A., Martono, T., & Gunarhadi, G. (2018). The analysis of learning infrastructure (LI), learning motivation (LM) and economics learning achievement (ELA). *Journal of Education and Learning (EduLearn), 12*(2), 236–243. https://doi.org/10.11591/edulearn.v12i2.8124

Soares, I., Venhorst, V., Weitkamp, G., & Yamu, C. (2022). The impact of the built environment on creativity in public spaces of Dutch university campuses and science parks. *Journal of Urban Design, 27*(1), 91–109. https://doi.org/10.1080/13574809.2021.1945433

Sousa, B. J., & Clark, A. M. (2024). Growth mindsets in academics and academia: A review of influence and interventions. *Journal of Higher Education Policy and Management, 00*(00), 1–19. https://doi.org/10.1080/1360080X.2024.2384003

Suharmanto, S., Hermawan, I., Inayah, I., & Khoerunisa, A. (2024). Building Readiness to Change in Organization through the Role of Affective Commitment and Personal Characteristics. International Journal of Management, Entrepreneurship, Social Science and Humanities, 8(1), 1–15. https://doi.org/10.31098/ijmesh.v8i1.2561

Sum, C., Lau, Y. Y., & Chan, I. (2022). The differences between students' fixed and growth mindsets: A case of study tour between Hong Kong and Canada. *Public Administration and Policy, 25*(3), 235–249. https://doi.org/10.1108/PAP-03-2022-0022

Thamrin, R. A., & Hutasuhut, S. (2023). Key factors to foster academic performance in online learning environment: Evidence from Indonesia during COVID-19 pandemic. *Powerful Education, 10*(1). https://doi.org/10.1080/2331186X.2023.2174726

Thygesen, H., Gramstad, A., Åsli, L. A., Stigen, L., Magne, T. A., Carstensen, T., & Bonsaksen, T. (2020). Associations between learning environment factors and student satisfaction among occupational therapy students. *Irish Journal of Occupational Therapy, 48*(2), 91–100. https://doi.org/10.1108/IJOT-10-2019-0015

Wingen, S., Graczyk, T., Wingen, T., & Dohle, S. (2024). Mindsets at work: Understanding the positive impact of growth mindsets on workplace coaching. *Basic and Applied Social Psychology, 46*(5), 381–397. https://doi.org/10.1080/01973533.2024.2382718

Yuan, Rong Man, Wen Ya Peng, and Jiang Jiang. 2024. "Relationship Between Growth Mindset and Self-Control Amongst Chinese Primary School Students: A Longitudinal Study." *Psychology Research and Behavior Management* 17:3101–9. https://doi.org/10.2147/PRBM.S468490

Zhang, P., Wang, Y., Chen, X., Yan, W., Zhu, Y., & Peng, K. (2023). Beyond the bell: Exploring the link between time allocation and extracurricular activities and academic performance in Chinese adolescents. *International Journal of Adolescence and Youth, 28*(1). https://doi.org/10.1080/02673843.2023.2277379

Zhao, H., Li, Y., Wan, L., & Li, K. (2023). Grit and academic self-efficacy as serial mediation in the relationship between growth mindset and academic delay of gratification: A cross-sectional study. *Psychology Research and Behavior Management, 16*, 3185–3198. https://doi.org/10.2147/PRBM.S421544