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Factors Influencing Student Perceptions of Rhynchostylis Gigantea Illustrations and Stress Levels at Suan Sunandha Rajabhat University, Nakhon Pathom Campus

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Abstract
The main objectives of this study were to examine the situations, to analyze selected factors and to investigate the perceptions toward Rhynchostylis Gigantea Illustrations and Stress Levels of College of Communication Arts (CCA), Suan Sunandha Rajabhat University, Nakhon Pathom Campus. Data from 91 undergraduate students, questionnaires were analyzed. Understanding how visual representations influence psychological and emotional responses among students is a growing area of interest in educational research. In particular, the use of botanical illustrations in academic settings not only serves aesthetic and educational purposes but may also impact students' mental well-being. This study focuses on Rhynchostylis gigantea, a native orchid species of Thailand, and explores how illustrations of this flower are perceived by undergraduate students in terms of both visual appreciation and emotional impact at Suan Sunandha Rajabhat University, Nakhon Pathom Campus—specifically within College of Communication Arts (CCA)—student stress levels are a concern due to academic pressures and personal challenges. In this context, the integration of botanical illustrations into the learning environment raises important questions about their potential role in influencing student perceptions and reducing stress. The main objectives of this study were to examine the current situations related to student perceptions of Rhynchostylis gigantea illustrations, to analyze selected influencing factors such as academic standing and prior exposure to visual arts, and to investigate overall student perceptions and associated stress levels. Data were collected from 91 undergraduate students through structured questionnaires and analyzed to identify patterns and relationships between the illustrations and student well-being.

Keywords: selected factors, stress levels, rhynchostylis gigantea, Suan Sunandha Rajabhat University, Nakhon Pathom Campus

Faktor-Faktor yang Memengaruhi Persepsi Mahasiswa terhadap Ilustrasi Rhynchostylis Gigantea dan Tingkat Stres di Universitas Rajabhat Suan Sunandha Kampus Nakhon Pathom

Abstrak
Tujuan utama dari penelitian ini adalah untuk memeriksa situasi, menganalisis faktor-faktor terpilih, dan menyelidiki persepsi terhadap Ilustrasi Rhynchostylis Gigantea dan Tingkat Stres di College of Communication Arts (CCA), Universitas Suan Sunandha Rajabhat, Kampus Nakhon Pathom. Data dari 91 kuesioner mahasiswa sarjana dianalisis. Memahami bagaimana representasi visual memengaruhi respons psikologis dan emosional di antara mahasiswa merupakan bidang minat yang berkembang dalam penelitian pendidikan. Secara khusus, penggunaan ilustrasi botani dalam lingkungan akademis tidak hanya melayani tujuan estetika dan pendidikan, tetapi juga dapat memengaruhi kesejahteraan mental mahasiswa. Studi ini berfokus pada Rhynchostylis gigantea, spesies anggrek asli Thailand, dan mengeksplorasi bagaimana ilustrasi bunga ini dipersepsikan oleh mahasiswa sarjana dalam hal apresiasi visual dan dampak emosional. di Universitas Suan Sunandha Rajabhat, Kampus Nakhon Pathom

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—khususnya di dalam Fakultas Seni Komunikasi (CCA)—tingkat stres mahasiswa menjadi perhatian karena tekanan akademis dan tantangan pribadi. Dalam konteks ini, integrasi ilustrasi botani ke dalam lingkungan belajar menimbulkan pertanyaan penting tentang peran potensialnya dalam memengaruhi persepsi mahasiswa dan mengurangi stres.Tujuan utama dari penelitian ini adalah untuk meneliti situasi terkini terkait persepsi mahasiswa terhadap ilustrasi Rhynchostylis gigantea, menganalisis faktor-faktor yang memengaruhi seperti status akademis dan paparan sebelumnya terhadap seni visual, dan menyelidiki persepsi mahasiswa secara keseluruhan dan tingkat stres terkait. Data dikumpulkan dari 91 mahasiswa sarjana melalui kuesioner terstruktur dan dianalisis untuk mengidentifikasi pola dan hubungan antara ilustrasi dan kesejahteraan mahasiswa.

Kata kunci: *faktor yang dipilih, tingkat stres, rhynchostylis gigantea, Suan Sunandha Universitas Rajabhat, Kampus Nakhon Pathom*

INTRODUCTION

University life is often marked by significant stress, with its intensity fluctuating based on the year of study. Key stressors include academic demands, financial pressures, social adjustment, and personal relationships. At Suan Sunandha Rajabhat University, Nakhon Pathom Campus, students explore botanical illustrations, such as Rhynchostylis gigantea, as a means of stress relief. This study aims to examine how stress influences tertiary students' perceptions of these images. It investigates the relationship between stress levels and students' evaluations of Rhynchostylis gigantea illustrations (No. 1-3), seeking to understand how academic and emotional stressors shape their cognitive and aesthetic reactions. The research will shed light on the effects of stress on visual perception and learning, ultimately striving to enhance educational strategies and foster a more supportive learning environment at the university.

LITERATURE REVIEW

Selected Factors

In the study of factors influencing student perceptions of Rhynchostylis gigantea illustrations and their stress levels at Suan Sunandha Rajabhat University, several key factors were identified and examined. These selected factors were categorized into three main groups: characteristics of the illustrations, individual student characteristics, and environmental factors. Each factor was hypothesized to affect how students perceive the botanical illustrations and experience stress.

1. Artistic Attributes of Illustrations

The quality and composition of the Rhynchostylis gigantea illustrations were a crucial factor in shaping student perceptions. The level of detail, color contrast, clarity, and overall aesthetic appeal of the images were analyzed. Previous studies suggest that these artistic features significantly influence how individuals

interpret and respond emotionally to visual representations (Thompson & Scott, 2018). High-quality and well-executed botanical illustrations have been shown to evoke positive emotional responses, while poorly executed images may lead to confusion or frustration (Harrison & Lee, 2020).

2. Prior Knowledge of Botany and Familiarity with Rhynchostylis Gigantea

Students' previous knowledge of botany and familiarity with the Rhynchostylis gigantea plant was also a determining factor in how they perceived the illustrations. Research has demonstrated that individuals with a higher level of prior knowledge tend to have more accurate and positive perceptions of scientific illustrations (Davis & Allen, 2019). Students with more exposure to botanical studies may experience less stress when interpreting complex plant images compared to those with limited prior knowledge.

3. Stress Levels

Students' perceived stress levels, as a response to interacting with Rhynchostylis gigantea illustrations, were assessed through self-reports and physiological indicators. Stress can be induced by various factors, including the cognitive load associated with understanding intricate botanical images (Mitchell & Robinson, 2021). Studies on stress in educational settings indicate that visual complexity and academic pressure are significant contributors to stress (Wang & Zhang, 2022). This factor was measured by assessing students' emotional responses and stress levels while engaging with the illustrations.

1. Cultural and Educational Background

Cultural and educational backgrounds were considered important in understanding how students might interpret botanical illustrations. Cultural differences in aesthetic appreciation and the influence of prior educational experiences have been shown to shape how students respond to visual stimuli (Kumar & Sethi, 2020). For example, students from different cultural contexts may have varying levels of appreciation or difficulty with Western-style botanical illustrations.

2. Demographic Factor

Age was also considered as demographic factors that could influence student perceptions. Research has shown that age can influence visual preferences and stress responses. For instance, younger individuals may process visual stimuli differently, which could affect their stress levels and perceptions of botanical illustrations (Singh & Patel, 2021).

These selected factors provide a comprehensive view of the various influences on student perceptions of Rhynchostylis gigantea illustrations and stress levels. By investigating these factors, the study aimed to uncover the complex interactions that affect student experiences in educational settings involving botanical art and science.

Rhynchostylis Gigantea

According to Tran Van Minh (2019), Rhynchostylis gigantea (Figure 1) is a popular wild orchid species found in Vietnam, especially in the South Central Highlands near Laos and Cambodia, at altitudes under 600 meters. It is heat-resistant and grows well in temperatures between 26°C and 30°C. In addition, Rhynchostylis gigantea displays significant color variation, with flower hues including red, white, shrimp brick, blue, and pink. (Minh, 2019). Moreover, Rhynchostylis species, especially R. gigantea, are found only in Southeast Asian countries like Thailand, Laos PDR, and Myanmar. R. gigantea is the most popular and in high demand compared to other native orchids (Anuttato et al. 2017). According to Normita Thongtham (2012), Rhynchostylis in Thailand typically blooms each year between January and February.

Figure 1. Rhynchostylis gigantea.
Source: https://gardinonursery.com/product/rhynchostylis-gigantea-cartoon-3-pot/

Stress Levels

Stress levels describe the physiological and psychological responses individuals experience when facing challenging or demanding situations that they perceive as threatening or overwhelming. Stress levels are basically how our bodies and minds react when we're faced with tough or demanding situations that seem scary or too much to handle (Fiveable, 2025). In addition, stress is basically that feeling of worry or mental strain we get when things get tough. It's a totally normal part of being human and actually helps us deal with the challenges and threats we face in life. Everyone feels stressed at some point or another. But how we handle that stress can really impact how we feel overall (World Health Organization, 2023).

Suan Sunandha Rajabhat University, Nakhon Pathom Campus

Suan Sunandha Rajabhat University (SSRU), Nakhon Pathom Campus (Figure 2), is a public university located in Nakhon Pathom Province, Thailand. The

university is one of the four campuses of SSRU, which was established in 1937 as a teacher training college (Suan Sunandha Rajabhat University, 2020). The Nakhon Pathom Campus offers a range of undergraduate and graduate programs in fields such as education, humanities, social sciences, and health sciences (Suan Sunandha Rajabhat University, 2025). The campus is committed to providing high-quality education and research opportunities, with a focus on community engagement and social responsibility (Suan Sunandha Rajabhat University, 2020). SSRU has undergone significant transformations over the years, including its transition from a teacher training college to a comprehensive university (Kanchanaporn, 2017). Today, the university is recognized for its academic excellence, innovative research, and community outreach programs (Suan Sunandha Rajabhat University, 2020).

Figure 2. Suan Sunandha Rajabhat University Nakhon Pathom Campus.
Source: https://npt.ssru.ac.th/en/news/view/2711256

METHOD

This research utilizes a mixed-methods approach to investigate the factors affecting Tertiary students at College of Communication Arts (CCA),Suan Sunandha Rajabhat University, Nakhon Pathom Campus (Figure 3) perceptions of Rhynchostylis gigantea illustrations and their corresponding stress levels at Suan Sunandha Rajabhat University, Nakhon Pathom Campus. By integrating quantitative and qualitative methods, this study aims to provide a thorough and nuanced understanding of the subject matter.

Figure 3. Tertiary students at the College of Communication Arts (CCA), Suan Sunandha Rajabhat University, Nakhon Pathom Campus have engaged with three Rhynchostylis Gigantea illustrations.
Source: Tawipas's Documentation, 2025.

Objectives of the Study:

1. To examine the correlation between Rhynchostylis Gigantea Illustrations and Stress Levels of university students at Suan Sunandha Rajabhat University, Nakhon Pathom Campus.
2. To analyze how student demographics (age) correlate with their perceptions of Rhynchostylis Gigantea illustrations.
3. To analyze: how often (frequency) students feel mild stress in relation to their perceptions of Rhynchostylis Gigantea illustrations

Rhynchostylis Gigantea Illustration No.1

Rhynchostylis Gigantea Illustration No.2

Rhynchostylis Gigantea Illustration No.3

Figure 4. Rhynchostylis Gigantea Illustration No.1-3.
Source: https://www.flickr.com/photos/42418064@N00/albums/72177720319893043

Figure 5. Stress Levels of University Students.
Sources: https://www.freepik.com/

To find objective 1, this study looks at the relationship between Rhynchostylis gigantea illustrations No.1-3 (Figure 4) and stress levels (Figure 5) of university students at Suan Sunandha Rajabhat University, Nakhon Pathom Campus. A quantitative research design will be used, including a Paired Samples

Test. To find objective 2, this study looks at the relationship between student demographics (age) at Suan Sunandha Rajabhat University, Nakhon Pathom Campus. correlate with their perceptions of Rhynchostylis gigantea illustrations No.1-3. A quantitative research design will be employed, featuring a One -Way ANOVA analysis. To find objective 3, this study aims to investigate the correlation between the frequency of mild stress experienced by students at Suan Sunandha Rajabhat University, Nakhon Pathom Campus, and their perceptions of Rhynchostylis gigantea illustrations No. 1-3. A quantitative research design will be implemented, utilizing a One-Way ANOVA analysis to derive insights.

RESULTS

Result for Objective 1 as shown in Table 1-3 : The study found a statistically significant reduction in stress levels among students after viewing Rhynchostylis gigantea illustrations, as measured by the Paired Samples Test ($p < 0.05$).

Table 1. Paired Samples Test: Analyzing Rhynchostylis gigantea Illustrations No. 1 impact on University Students' Stress Levels

		Mean	n	Std. Deviation	Std. Eror Mean	95% Confidence Interval of the Difference		t	df	Sig. (2 –tailed)
						Lower	Upper			
Pair 1	Rhynchostylis Gigantea Illustrations No.1-Stress Levels	-0.93	91	2.37	0.25	-1.427	-0.433	-3.75	90	0.00031

A t-test was conducted to examine the relationship between the variables. The value of t was found to be -3.75, with a p-value of 0.00031. Since the p-value is less than the significance level of 0.05, the result is considered statistically significant. Therefore, we can reject the null hypothesis and conclude that there is a significant difference (or effect) between the variables.

Table 2. Paired Samples Test: Analyzing Rhynchostylis gigantea Illustrations No. 2 impact on University Students' Stress Levels

		Mean	n	Std. Deviation	Std. Eror Mean	95% Confidence Interval of the Difference		t	df	Sig. (2 –tailed)
						Lower	Upper			
Pair 2	Rhynchostylis Gigantea Illustrations No.2-Stress Levels	-1.99	91	2.38	0.25	-2.487	-1.493	-7.96	90	< 0.00001

A t-test was conducted to examine the relationship between the variables. The value of t was found to be -7.96, with a p-value of less than 0.00001. Since the p-value is much smaller than the significance level of 0.05, the result is considered statistically significant. Therefore, we reject the null hypothesis and conclude that there is a significant difference (or effect) between the variables.

Table 3. Paired Samples Test: Analyzing Rhynchostylis gigantea Illustrations No. 3 impact on University Students' Stress Levels

		Mean	n	Std. Deviation	Std. Eror Mean	95% Confidence Interval of the Difference		t	df	Sig. (2 –tailed)
						Lower	Upper			
Pair 3	Rhynchostylis Gigantea Illustrations No.3-Stress Levels	-1.69	91	2.83	0.25	-2.281	-1.099	-5.69	90	< 0.00001

A t-test was conducted to examine the relationship between the variables. The value of t was -5.69, with a p-value of less than 0.00001. Since the p-value is significantly smaller than the threshold of 0.05, the result is considered statistically significant. Therefore, the null hypothesis is rejected, indicating that there is a significant difference (or effect) between the variables.

Result for Objective 2 as shown in Table 4: The One-Way ANOVA test revealed a statistically significant difference in students' perceptions of the Rhynchostylis gigantea illustrations 1-3 across different age groups ($p < 0.05$).

Table 4. ANOVA (Age - Rhynchostylis Gigantea Illustrations)

Groups	Samples	Sum	Mean	Variance
Age	91	1841	20.2308	1.165
Rhynchostylis Gigantea Illustrations No.1	91	490	5.3846	1.4815
Rhynchostylis Gigantea Illustrations No.2	91	525	5.7692	1.4226
Rhynchostylis Gigantea Illustrations No.3	91	503	5.5275	1.6756

Source	Sum of Square	df	Mean Square	F Statistic	P-value
Between-treatments	14695.5467	3	4898.5156	F = 2337.17879	< .00001
Within-treatments	754.5275	360	2.0959		
Total	15450.0742	363			

The *f*-ratio value is 2337.17879. The *p*-value is < .00001. The result is significant at $p < .05$.

Result for Objective 3 as shown in Table 5: The One-Way ANOVA test revealed a statistically significant difference in that Frequency of mild stress occurs significantly influences students' perceptions of illustrations of Rhynchostylis Gigantea illustrations 1-3 ($p < 0.05$).

Table 5. ANOVA (Frequency of Mild Stress- Rhynchostylis Gigantea Illustrations)

Groups	Samples	Sum	Mean	Variance
Frequency of Mild Stress	91	222	2.4396	0.897
Rhynchostylis Gigantea Illustrations No.1	91	493	5.4176	1.528
Rhynchostylis Gigantea Illustrations No.2	91	526	5.7802	1.4438
Rhynchostylis Gigantea Illustrations No.3	91	506	5.5604	1.727

Source	Sum of Square	df	Mean Square	F Statistic	P-value
Between-treatments	681.7885	3	227.2628	$F = 110.77414$	< .00001
Within-treatments	738.5714	360	2.0516		
Total	1420.3599	363			

The *f*-ratio value is 110.77414. The *p*-value is < .00001. The result is significant at $p < .05$.

In summary, One-Way ANOVA results show an F-ratio of 110.77414 and a p-value of less than .00001, indicating that mild stress significantly affects students' perceptions of Rhynchostylis Gigantea illustrations (No. 1-3). The large F-ratio indicates notable differences between control and stressed groups. The low p-value suggests these differences are not due to chance. This highlights that repeated mild stress exposure can change visual perception, pointing to the need for more research on how stress frequency impacts cognitive processing and visual interpretation.

DISCUSSION

This report addresses Objective 1 of the study examining the correlation between Rhynchostylis gigantea, illustrated in Table 1-3, and the stress levels of university students at Suan Sunandha Rajabhat University, Nakhon Pathom Campus. The investigation employs a quantitative research design, featuring a Paired Samples Test. The findings for Objective 1 are presented below.

- Rhynchostylis gigantea illustration No.1 had a significant effect on students' stress levels in Table 1.
- Rhynchostylis gigantea illustration No.2 concludes that the illustrations had a significant effect in reducing stress among university students in Table 2.
- Rhynchostylis gigantea illustration No.3 concludes that the illustrations had a significant effect on reducing students' stress levels in Table 3.

In addition, this report also addresses Objective 2 of the study examining the relation between Rhynchostylis gigantea, illustrated and age of students at Suan Sunandha Rajabhat University, Nakhon Pathom Campus in Table 4. The results of the One-Way ANOVA indicated that students' perceptions of Rhynchostylis gigantea illustrations 1–3 differed significantly among various age groups. The F-ratio value was 2337.17879 with a p-value of < .00001, demonstrating a highly significant effect of age on perception at the $p < .05$ level.

Furthermore,this report analyzes Objective 3 of the study regarding the connection between Rhynchostylis gigantea illustrations and the frequency of mild stress among students at Suan Sunandha Rajabhat University, Nakhon Pathom Campus, as shown in Table 5. The One-Way ANOVA analysis reveals that the frequency of mild stress has a significant effect on how students perceive Rhynchostylis Gigantea illustrations (No. 1–3). With a p-value of less than 0.00001, the results indicate that repeated exposure to mild stress meaningfully alters perception of visual stimuli, such as botanical illustrations. This finding highlights the need for further research into how the frequency and intensity of stress influence visual perception, particularly in the context of art and nature.

CONCLUSION

In summary, this study compellingly illustrates that images of Rhynchostylis gigantea can significantly reduce stress levels among students. It shows that students' perceptions of this calming effect are markedly influenced by factors such as age-averaging 20 years among a sample of 91 individuals from College of Communication Arts at Suan Sunandha Rajabhat University, Nakhon Pathom Campus-personal stress levels, and the frequency of stress experiences. These findings highlight the dual function of botanical illustrations as not merely educational tools but also effective therapeutic resources in university settings, fostering student well-being. Further research is encouraged to explore the psychological impact of natural visual elements across different learning environments. Such insights could lead to innovative strategies for enhancing educational outcomes and supporting mental health within academic contexts.

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