



Academic Flow in Higher Education: The Contribution of Self-Compassion and Study Habits

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Abstract

Academic flow is an optimal psychological state characterized by intense concentration, intrinsic motivation, and deep engagement in learning activities, which is essential for meaningful learning in higher education. However, many university students experience difficulties in maintaining sustained engagement amid increasing academic demands. This study aimed to examine the influence of self-compassion and study habits on academic flow among fifth-semester undergraduate students at the Faculty of Education, Universitas Negeri Yogyakarta. A quantitative correlational design was employed with a sample of 323 students selected through proportionate random sampling. Data were collected using validated scales of self-compassion, study habits, and academic flow, and analyzed through multiple and simple linear regression techniques. The findings revealed that self-compassion and study habits simultaneously have a significant influence on academic flow, explaining 12.5% of its variance. Partially, self-compassion explains 6.3%, while study habits explain 8.2% of the variance in academic flow. These findings demonstrate that academic flow is shaped by both internal psychological resources and structured learning behaviors. The study provides empirical evidence for integrating emotional resilience development and adaptive study strategies in instructional practices to enhance student engagement and optimize learning outcomes in higher education.

Keywords: Academic Flow; Self-compassion; Study Habits; University Students

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INTRODUCTION

Every individual, in carrying out daily activities, is confronted with various demands that require high levels of focus and deep psychological involvement. When individuals are able to devote full attention to and derive enjoyment from the activities they perform, they may experience an optimal state of intrinsic engagement. This psychological condition is known as flow, defined as an optimal psychological state in which individuals become fully immersed in an activity to the extent that they lose awareness of time, fatigue, and external distractions (Csikszentmihalyi, 2014b). Flow is characterized by intense concentration, a sense of control over the activity, reduced distraction, and intrinsic enjoyment during task engagement. To date, flow remains a central concept in positive psychology due to its relevance in explaining individuals' optimal engagement experiences (Zhang & Wang, 2024).

Research on flow has expanded across various life domains, including work, sports, arts, and education. Empirical studies indicate that flow experiences contribute to personal development, quality of engagement, and meaningful subjective experiences in performing activities (Antonini Philippe et al., 2022; Peifer & Wolters, 2017; Shernoff et al., 2014). Within the educational context, flow has gained particular attention because of its direct association with learning engagement and instructional effectiveness. In higher education, this construct is commonly referred to as academic flow, defined as students' optimal engagement in academic activities, characterized by deep absorption, enjoyment of learning, and intrinsic motivation (Bakker et al., 2017).

Bakker et al. (2017) operationalized academic flow into three primary dimensions: absorption, enjoyment, and intrinsic motivation. This approach is considered more applicable in academic settings than the phenomenological characteristics of flow proposed by Csikszentmihalyi (1990), as it allows for more consistent and empirical measurement of students' learning experiences. Academic flow reflects profound cognitive and emotional engagement, enabling students to perceive learning activities as valuable and meaningful experiences (Nastiti & Cahyani, 2022). Therefore, academic flow not only represents intense learning engagement but also captures the qualitative aspects of students' learning experiences.

Undergraduate students constitute a relevant population in the study of academic flow, as they are generally situated in the developmental phase of emerging adulthood, typically ranging from 18 to 25 years old (Arnett, 2000; Murray & Arnett, 2019). This phase is characterized by identity exploration, increasing academic responsibility, and more complex self-regulation demands. Moreover, contemporary university students are often associated with intensive digital engagement and multitasking tendencies, which may contribute to fluctuations in attention and learning focus (Subroto et al., 2025). These developmental and contextual characteristics make students more vulnerable to instability in academic engagement, thereby highlighting the importance of psychological and behavioral resources in sustaining academic flow.

Academic challenges in higher education, particularly among mid-level undergraduate students, intensify alongside increasing curricular complexity. Fifth-semester students are generally required to complete core courses and practicum-based subjects that demand integration between theoretical understanding and practical application (Budiani et al., 2021). Such conditions require students not only to comprehend conceptual material but also to apply it contextually within academic activities. High academic workload, increased expectations for independent learning, and assignment-related pressures place students at risk of diminished focus and engagement when not supported by adequate psychological resources (Karos et al., 2021). Excessive academic pressure has also been reported among university students in Indonesia and has been associated with heightened academic stress (Hudi et al., 2024). This condition may hinder students' ability to achieve optimal engagement in learning processes. Although academic flow represents an ideal learning state, not all students experience it consistently. Research indicates that academic flow is dynamic and situational, strongly influenced by both instructional contexts and students' psychological conditions (Aini & Fahriza, 2020). This suggests that academic flow does not emerge automatically but depends on the interaction between individual capacities and contextual learning demands.

An imbalance between academic demands and individual capabilities may lead to boredom or anxiety, thereby obstructing the emergence of academic flow (Csikszentmihalyi, 2014a). When challenges are perceived as either excessively high or insufficiently stimulating, students are more likely to lose optimal engagement in learning activities. Therefore, achieving a balance between demands and competencies is crucial for fostering academic flow. Within the Faculty of Education at Universitas Negeri Yogyakarta, students are required to engage in intensive coursework and various academic activities demanding sustained concentration and active participation (Supriyadi et al., 2023). They are also expected to independently manage time, assignments, and learning strategies in navigating the complexities of higher education (Wangid et al., 2025). Such conditions necessitate sustained cognitive and affective engagement throughout the learning process. Given these characteristics, academic flow becomes a critical factor in supporting the quality of learning among fifth-semester students at the Faculty of Education, particularly as they navigate increasing academic complexity.

The attainment of academic flow is closely associated with students' internal psychological resources. One relevant internal factor is self-compassion, defined as an individual's ability to respond to difficulties and pressures with self-kindness, balanced awareness, and recognition that imperfection is part of the shared human experience (Neff, 2003). The concept of self-compassion has further evolved to explain how individuals maintain emotional equilibrium when facing academic stressors (Neff, 2023). Empirical evidence suggests that self-compassion contributes to educational flow by fostering more adaptive emotional regulation and attentional processes (Wang et al., 2023). Other findings also indicate that self-compassion supports academic flow among university students through specific psychological mechanisms (Metawe, 2020).

In addition to internal factors, study habits are considered an important behavioral component in facilitating academic flow. Study habits reflect consistent learning behaviors such as time management, task completion, reading, and note-taking practices (Atsuwe & Moses, 2017). Structured study habits help students maintain focus and a sense of control during the learning process. Effective study habits enhance learning engagement, which serves as a prerequisite for achieving academic flow (Ahmed et al., 2018). Conversely, poor study habits may hinder sustained academic engagement, particularly when students encounter distractions and motivational instability (David et al., 2024; Sunday & Akporehwe, 2022).

Preliminary observations conducted among fifth-semester students at the Faculty of Education, Universitas Negeri Yogyakarta, indicate that some students experience difficulties maintaining learning focus and deriving enjoyment from academic activities, particularly in courses requiring the integration of theoretical understanding and practical application. Students also reported that their engagement tends to fluctuate, especially when facing high workloads and overlapping deadlines. These conditions suggest that academic flow has not yet been optimally established and may be influenced by how students respond to academic demands as well as by the study habits they develop.

Previous studies have examined self-compassion and study habits in relation to academic stress, coping, academic achievement, and student well-being. Research has also explored academic flow in connection with factors such as social support and self-regulated learning. However, most prior studies have investigated these variables separately or within different educational contexts. Empirical studies that simultaneously examine self-compassion and study habits as predictors of academic flow remain limited, particularly in the context of Indonesian higher education. In addition, research focusing specifically on fifth-semester undergraduate students, who face increasing academic complexity and practicum demands, is still scarce.

Understanding psychological and behavioral predictors of academic flow provides an important foundation for designing effective instructional strategies in higher education. Academic flow reflects students' deep engagement and optimal learning experiences, which are influenced by both emotional readiness and structured learning behavior. Therefore, identifying the influence of self-compassion and study habits on academic flow is essential for instructional planning and student development. Accordingly, this study aims to examine the influence of self-compassion and study habits on academic flow among fifth-semester students at the Faculty of Education, Universitas Negeri Yogyakarta.

RESEARCH METHODS

Research Design

This study employed a quantitative approach with an ex post facto design, aiming to examine the influence of independent variables on a dependent variable without administering direct treatment to the research subjects (Sukardi, 2021). The independent variables in this study were self-compassion (X_1) and study habits (X_2), while the dependent variable was academic flow (Y).

Time and Place of Research

The research was conducted during the 2025/2026 academic year at the Faculty of Education, Universitas Negeri Yogyakarta (FIP UNY), Indonesia.

Research Population and Sample

The population consisted of 1,056 fifth-semester undergraduate students distributed across eight study programs within FIP UNY. The required minimum sample size was determined using the Krejcie & Morgan (1970) table at a 5% margin of error, resulting in a minimum of 282 respondents. Proportional random sampling was applied to ensure that each study program was represented proportionally according to its population characteristics. Data were collected online using Google Forms, yielding 323 respondents. This number exceeded the minimum sample requirement, indicating that the data were adequate for further statistical analysis.

Instruments and Data Collection Techniques

Data were collected using psychological instruments in the form of Likert-scale questionnaires. Self-compassion was measured using the Self-Compassion Scale (SCS) developed by Neff (2003) and adapted into Indonesian by Sugianto et al. (2020). Study habits were measured using the Study Habit Inventory Questionnaire (SHIQ) developed by Atsuwe and Moses (2017). Academic flow was measured using the Study-Related Flow Inventory (WOLF-S) developed by Bakker et al. (2017). The SHIQ and WOLF-S instruments were adapted into Indonesian through forward translation and back-translation procedures to ensure semantic equivalence with the original versions.

Content validity was assessed using Aiken's V based on expert judgment from two experts. The results indicated that all instrument items achieved very high Aiken's V values, demonstrating adequate construct representation. Reliability testing was conducted using Cronbach's Alpha (α). The reliability coefficients were 0.903 for the self-compassion scale, 0.781 for the study habits scale, and 0.902 for the academic flow scale, all exceeding the acceptable reliability threshold ($\alpha > 0.60$). Therefore, the instruments were considered reliable and appropriate for use.

Data Analysis Technique

Data were analyzed using multiple linear regression to examine the influence of self-compassion and study habits on academic flow. Prior to hypothesis testing, descriptive statistical analysis and prerequisite tests were conducted, including normality testing using the Kolmogorov-Smirnov test, multicollinearity testing by examining Variance Inflation Factor (VIF) and tolerance values, and heteroscedasticity testing using the Glejser method and residual scatterplot analysis. Hypothesis testing was performed using the F-test to determine the simultaneous effect of the independent variables and the t-test to examine their partial effects on academic flow. The coefficient of determination (R^2) was calculated to determine the extent to which the independent variables explained the variance in academic flow. All statistical analyses were conducted using SPSS version 25 for Windows.

Methodological Limitations

It should be noted that this study employed a cross-sectional design, which limits the ability to draw causal inferences among the variables. The findings therefore reflect statistical associations rather than definitive causal relationships. In addition, data were collected using self-report questionnaires administered online, which may introduce potential respondent bias, such as social desirability bias or subjective interpretation of items. These methodological limitations should be considered when interpreting the results of the study.

RESULTS AND DISCUSSION

This study involved fifth-semester undergraduate students from the Faculty of Education, Universitas Negeri Yogyakarta (FIP UNY), during the 2025/2026 academic year. The total population consisted of 1,056 students distributed across eight study programs. Based on the Krejcie and Morgan (1970) table at a 5% margin of error, the minimum required sample size was 282 students. In the implementation phase, data collection successfully obtained responses from 323 participants. This number exceeded the minimum requirement, indicating that the sample size was statistically adequate for further analysis. The distribution of respondents across study programs is presented in Table 1. The data indicate that all study programs within FIP UNY were proportionally represented. This proportional distribution suggests that the sample adequately reflects the characteristics of the research population, thereby supporting the generalizability of the findings within the population context.

Table 1. Distribution of Respondents by Study Program

No.	Study Program	Number of Respondents
1.	Bimbingan dan Konseling (BK)	29
2.	Kebijakan Pendidikan (KP)	15
3.	Manajemen Pendidikan (MP)	38
4.	Pendidikan Guru PAUD (PG PAUD)	33
5.	Pendidikan Guru Sekolah Dasar (PGSD)	91
6.	Pendidikan Luar Biasa (PLB)	52
7.	Pendidikan Nonformal (PNF)	37
8.	Teknologi Pendidikan (TP)	28
Total		323

Subsequently, descriptive statistical analysis was conducted to provide a general overview of the variables self-compassion, study habits, and academic flow among students. The descriptive statistics included minimum scores, maximum scores, score ranges, means, and standard deviations. The summary of the descriptive statistical analysis is presented in Table 2.

Table 2. Descriptive Statistics of Research Variables

No.	Variable	Min	Max	Range	Mean	Std. Dev
1.	<i>Self-Compassion</i>	54	120	66	85.24	12.06
2.	<i>Study Habits</i>	33	85	52	60.30	9.44
3.	<i>Academic Flow</i>	33	80	47	55.62	9.05

Based on Table 2, the self-compassion variable obtained a mean score of 85.24 with a standard deviation of 12.06. The study habits variable showed a mean score of 60.30 with a standard deviation of 9.44. Meanwhile, the academic flow variable had a mean score of 55.62 with a standard deviation of 9.05. The standard deviation values indicate moderate variability in the data, suggesting that the respondents' scores were relatively distributed around the mean without extreme dispersion.

Prior to hypothesis testing, the data were examined to ensure that the assumption of normality was satisfied. The normality test was conducted using the One-Sample Kolmogorov–Smirnov test. The results indicated that all variables had significance values greater than 0.05, suggesting that the data were normally distributed. A summary of the normality test results is presented in Table 3.

Table 3. Results of Kolmogorov–Smirnov Normality Test

No.	Variable	N	K-SZ	Sig.	Interpretation
1.	<i>Self-Compassion</i>	323	0.037	0.200	Normal
2.	<i>Study Habits</i>	323	0.046	0.200	Normal
3.	<i>Academic Flow</i>	323	0.045	0.200	Normal

After confirming the normality assumption, further testing was conducted to ensure the absence of multicollinearity among the independent variables in the regression model. Multicollinearity testing aims to determine whether the independent variables are excessively correlated, which could compromise the stability of regression estimates. This test was performed by examining the tolerance values and Variance Inflation Factor (VIF). The regression model is considered free from multicollinearity if the tolerance value exceeds 0.10 and the VIF value is below 10. The summary of the multicollinearity test results is presented in Table 4.

Table 4. Results of Multicollinearity Test

No.	Variable	Tolerance	VIF	Interpretation
1.	<i>Self-Compassion</i>	0.934	1.071	No multicollinearity
2.	<i>Study Habits</i>	0.953	1.049	No multicollinearity

Based on the multicollinearity test results presented in Table 4, all independent variables showed tolerance values above 0.10 and VIF values below 10. These findings indicate that there is no high correlation among the independent variables in the regression model. Therefore, the regression model is free from multicollinearity and considered appropriate for multiple linear regression analysis.

Subsequently, a heteroscedasticity test was conducted to ensure that the variance of residuals in the regression model was homogeneous. The heteroscedasticity test was performed using the Glejser method by examining the significance values of each independent variable. A regression model is considered free from heteroscedasticity if the significance values exceed 0.05. The summary of the heteroscedasticity test results is presented in Table 5.

Table 5. Results of Heteroscedasticity Test

No.	Variable	Sig.	Interpretation
1.	<i>Self-Compassion</i>	0.577	No heteroscedasticity
2.	<i>Study Habits</i>	0.281	No heteroscedasticity

As shown in Table 5, all independent variables obtained significance values greater than 0.05. This indicates that the regression model does not exhibit heteroscedasticity and satisfies the assumptions required for linear regression analysis.

After all classical assumptions were satisfied, multiple linear regression analysis was conducted to examine the simultaneous influence of self-compassion and study habits on academic flow. The results of the ANOVA test are presented in Table 6.

Table 6. ANOVA Results of Multiple Regression

Model	F	Sig.
<i>Regression</i>	22.873	0.000

The ANOVA results show that the regression model is statistically significant ($F = 22.873$, $p < 0.05$). This indicates that self-compassion and study habits simultaneously have a significant effect on academic flow. Therefore, the regression model is appropriate for further interpretation.

Following the confirmation of the model's significance, the coefficient of determination was examined to assess the magnitude of contribution of the independent variables. The summary of the regression model is presented in Table 7.

Table 7. Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.354	0.125	0.120	8.505

The R value of 0.354 indicates a moderate positive relationship between the independent variables and academic flow. The coefficient of determination (R^2) of 0.125 indicates that self-

compassion and study habits simultaneously explain 12.5% of the variance in academic flow, while the remaining 87.5% is influenced by other variables outside the model. The adjusted R^2 value of 0.120 further confirms that the regression model remains stable after controlling for the number of predictors included in the analysis.

Table 8. Results of Multiple Linear Regression Analysis

Variable	B	Std. Error	t	Sig.
(Constant)	27.550	4.216	6.534	0.000
Self-Compassion (X_1)	0.158	0.040	3.969	0.000
Study Habits (X_2)	0.242	0.051	4.769	0.000

The regression equation can be formulated as:

$$Y = 27.550 + 0.158X_1 + 0.242X_2$$

The t-test results indicate that self-compassion has a significance value of 0.000 (< 0.05), demonstrating a significant effect on academic flow. Similarly, study habits show a significance value of 0.000 (< 0.05), indicating a significant effect on academic flow. The positive regression coefficients suggest that increases in self-compassion and study habits are associated with increases in academic flow.

To further examine the partial contribution of each independent variable, simple regression analyses were conducted.

Table 9. Model Summary of Self-Compassion Regression on Academic Flow

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.251	0.063	0.060	8.789

The R^2 value of 0.063 indicates that self-compassion contributes 6.3% to academic flow, while 93.7% of the variance is influenced by other factors.

Table 10. Model Summary of Study Habits Regression on Academic Flow

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.286	0.082	0.079	8.699

The R^2 value of 0.082 indicates that study habits contribute 8.2% to academic flow, while 91.8% of the variance is explained by variables outside the research model.

In addition to the coefficient of determination (R^2), effect size can also be interpreted from the standardized beta (β) values presented in the regression analysis. Self-compassion showed a standardized beta of 0.251, while study habits showed a standardized beta of 0.286. According to Cohen's criteria, these values indicate small to moderate effect sizes, with study habits demonstrating a relatively stronger effect on academic flow compared to self-compassion.

Based on the statistical findings, it can be concluded that self-compassion and study habits, both simultaneously and partially, have a significant influence on students' academic flow. These findings indicate that internal psychological attitudes and structured learning behaviors play an important role in shaping optimal academic engagement. Academic flow refers to a state of deep absorption, concentration, and intrinsic enjoyment in learning activities, as conceptualized by Csikszentmihalyi (2014). The presence of flow in academic contexts reflects students' ability to balance challenges and skills while maintaining sustained involvement in learning tasks.

The simultaneous contribution of 12.5% suggests that academic flow among fifth-semester students at the Faculty of Education, Universitas Negeri Yogyakarta is influenced by identifiable psychological and behavioral factors. Although the magnitude of contribution appears relatively modest, this finding is theoretically reasonable. Academic flow is a multidimensional construct shaped

by the interaction of various internal and external factors, including academic self-efficacy, intrinsic motivation, perceived competence, instructional quality, and learning environment. Since this study specifically examined only two predictors, namely self-compassion and study habits, the remaining variance may be attributed to other psychological and contextual variables not included in the present model. Therefore, the 12.5% contribution should be interpreted as a meaningful partial explanation rather than a comprehensive determinant of academic flow. Budiani et al. (2021) emphasize that students at the middle stage of undergraduate study experience increasing academic complexity, particularly in courses requiring integration of theoretical understanding and practical application. Such conditions require both emotional regulation and structured learning behavior.

In line with Wangid et al. (2025), university students must maintain stable cognitive and affective engagement to adapt to the dynamic demands of higher education. The findings of this study suggest that self-compassion and study habits function as internal resources that help students maintain that stability. Self-compassion, as defined by Neff (2003), consists of self-kindness, common humanity, and mindfulness. These components enable individuals to respond to personal difficulties with understanding rather than harsh self-judgment. In academic settings, this adaptive emotional response becomes crucial when students face academic pressure, deadlines, and performance expectations.

The partial contribution of self-compassion amounting to 6.3% indicates that emotional regulation mechanisms play a meaningful role in supporting academic flow. Students who possess higher self-compassion are more capable of reducing excessive self-criticism and maintaining emotional balance during academic challenges. This finding is consistent with Metawe (2020), who reported that self-compassion enhances academic flow through adaptive emotional regulation processes. Emotional stability allows cognitive resources to remain focused on academic tasks, thereby facilitating deeper engagement.

Meanwhile, study habits demonstrate a partial contribution of 8.2%, representing the strongest effect among the independent variables. This finding highlights the critical role of structured learning behavior in facilitating academic flow. Effective study habits include time management, organized study routines, task prioritization, and consistency in learning activities. Ahmed et al. (2018) found that effective study habits are associated with improved concentration and higher-quality learning experiences. Similarly, Svartdal et al. (2022) reported that maladaptive study behaviors, particularly academic procrastination, can inhibit the emergence of academic flow. Therefore, structured learning behaviors provide the behavioral foundation necessary for sustained cognitive engagement.

The stronger contribution of study habits compared to self-compassion suggests that behavioral regulation may exert a more direct influence on students' engagement experiences. While self-compassion strengthens emotional resilience, study habits structure the learning process itself. The interaction between emotional stability and behavioral organization supports the theoretical perspective that academic flow emerges from the balance between internal psychological readiness and structured task engagement, as proposed in flow theory (Csikszentmihalyi, 2014).

Although the findings confirm significant relationships, the relatively modest total variance explained indicates that academic flow is influenced by additional variables not included in this study. Factors such as academic self-efficacy, intrinsic motivation, perceived competence, autonomy support, and learning environment may contribute substantially to students' engagement. Future research is therefore recommended to integrate these variables into a more comprehensive explanatory model.

From a practical perspective, the findings provide empirical support for the integration of psychological and behavioral interventions in higher education guidance services. Programs aimed at enhancing self-compassion may assist students in managing academic stress and reducing maladaptive self-evaluation. At the same time, academic guidance programs focusing on improving study habits, including time management and structured planning, may strengthen students' readiness to engage deeply in learning activities. Such integrative strategies are particularly relevant for fifth-semester students who face increasing academic demands and higher expectations of independent learning (Budiani et al., 2021; Wangid et al., 2025).

CONCLUSION

This study concludes that self-compassion and study habits simultaneously have a significant effect on academic flow among fifth-semester students of the Faculty of Education, Universitas Negeri Yogyakarta, with a contribution of 12.5%. Partially, self-compassion contributes 6.3% and study habits contribute 8.2% to academic flow. These findings indicate that academic flow is influenced by students' emotional readiness and structured learning behavior. The novelty of this research lies in the empirical examination of the relationship between self-compassion and study habits with academic flow in fifth-semester students, a phase characterized by increasing academic demands. Theoretically, this study strengthens the understanding of academic flow as a multidimensional construct influenced by psychological and behavioral factors. Practically, the findings provide a basis for developing guidance and counseling programs in higher education, particularly those aimed at enhancing self-compassion and adaptive study habits to support optimal academic engagement. Furthermore, these findings are relevant to the development of effective learning strategies in higher education. They highlight the importance of integrating emotional regulation and structured learning habit formation into instructional design to foster sustainable academic engagement and meaningful learning experiences.

However, this study has several limitations. The use of a cross-sectional design limits the ability to draw causal inferences, and the reliance on self-report questionnaires may introduce response bias. In addition, the study was conducted within a single faculty in one university, which may limit the generalizability of the findings. Future research is recommended to employ longitudinal or experimental designs to better examine causal relationships, include additional psychological and contextual variables, and involve broader samples from different institutions to enhance external validity.

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