

Flow Academic of Students in Muhammadiyah High Schools in Yogyakarta, Indonesia: Role of Peer Attachment and Self-Regulated Learning

Yuni Kartika Ramli, Alif Mu'arifah*

Universitas Ahmad Dahlan, Kapas St., No.9, Yogyakarta, Special Region of Yogyakarta, Indonesia

*Corresponding author, email: alif.mu'arifah@bk.uad.ac.id

Article History

Received: 23 June 2024

Revised: 26 August 2024

Accepted: 27 August 2024

Keywords

Academic flow

Peer attachment

Self-regulated learning

Abstract

This study aims to ascertain the influence of peer attachment and self-regulated learning on the academic flow of students at Muhammadiyah senior high schools in Yogyakarta, Indonesia. This study employed a quantitative research methodology. The study sample consisted of 255 twelfth-grade students of the Muhammadiyah High Schools, selected using the stratified random sampling technique. For the measurement, three psychological scales were employed, including the academic flow scale, the peer attachment scale, and the self-regulated learning (SRL) scale. The data were analyzed using multiple linear regression, with the assistance of the SPSS for Windows 23.0 program. The results of the primary hypothesis yielded an R-squared value of 0.603 with a p-value of 0.000 ($p < 0.01$), indicating that peer attachment and self-regulated learning exert a significant influence on academic flow. The first minor hypothesis test yielded a t-value of 2.189, with a p-value of 0.030, which is less than 0.05. The second minor hypothesis test yielded a t-value of 9.779 and a p-value of 0.000, indicating a statistically significant result ($p < 0.01$). The statistical results demonstrate that peer attachment and self-regulated learning have a significant impact on academic flow, with each factor exerting a positive influence. The results demonstrate that self-regulated learning makes a significant contribution to academic flow, accounting for 32.67% of the variance. Similarly, peer attachment is found to have a notable impact on academic flow, explaining 3.70% of the variation.

How to cite: Ramli, Y. K., & Mu'arifah, A. (2024). Flow Academic of Students in Muhammadiyah High Schools in Yogyakarta, Indonesia: Role of Peer Attachment and Self-regulated Learning. *Buletin Konseling Inovatif*, 4(2). 142–149. doi: 10.17977/um059v4i22024p142-149

1. Introduction

Academic flow is defined as a state in which an individual can focus and derive enjoyment from their academic pursuits (Barret, 2010). Students who experience flow tend to be more active in their learning, more enthusiastic about tackling challenging tasks, and more focused, thereby facilitating quality improvement in the academic domain (Shernoff, et al., 2003).

A survey was conducted on June 2, 2023, on students at Muhammadiyah High School in Yogyakarta, Indonesia, utilizing the Academic Flow Scale. The survey results indicated that 23% of students exhibited high academic flow, 40% demonstrated medium academic flow, and 37% displayed low academic flow. The survey results indicate that the majority of students at Muhammadiyah High School fall within the medium category for academic flow. However, the 37% of students who fall within the low category represents a notable proportion and warrants further investigation.

Flow engenders a sense of ease and involvement in the activities being undertaken, accompanied by a feeling of fulfillment. Flow is comprised of three key aspects, namely: (1) absorption; (2) enjoyment; and (3) intrinsic work motivation (Salanova, et al., 2006). Academic flow is influenced by both individual and environmental factors (Bauman & Scheffer, 2010). One environmental factor that affects academic flow is the smallest component of social support, also known as attachment (Prihandrijani, 2016).

In addition, attachment is defined as a relationship between two individuals characterized by an intense and very strong affectionate bond (Bowlby, 1982). The bond between these two people

generates an emotional relationship that is caused by a strong mutual relationship which further contributes to the quality of their relationship (Santrock, 2012). Aside from attachment to parents, adolescents also form attachments with their peers. The quality of peer attachment can provide a sense of security and stability, as observed from the adolescent psychological perspective (Armsden & Greenberg, 1987).

Attachment is comprised of three distinct aspects, including trust, communication, and seclusion (Armsden & Greenberg, 1987). Peer friendships can foster a sense of comfort and engagement in school activities, facilitating active participation in the learning process (Rohmatul & Jainudin, 2019). Conversely, peer isolation can lead to feelings of alienation and avoidance (Armsden & Greenberg, 1987).

One of the internal influencing factors of academic flow is self-regulated learning (Amira & Muhid, 2020). Self-regulated learning is defined as a level of student ability comprising metacognitive engagement and motivation throughout the learning process. This facilitates students to engage in the independent acquisition of knowledge, operating without reliance on external sources such as teachers, parents, or other individuals (Zimmerman, 1989). Self-regulated learning contains eight aspects, namely: (1) goal setting; (2) planning; (3) self-motivation; (4) attention control; (5) flexible use of strategies; (6) self-monitoring; (7) help-seeking and; (8) self-evaluation (Zumbrunn, et al., 2011). Self-regulated learning serves as a regulator to achieve academic flow. Prior research indicates that self-regulated learning is associated with academic flow. Individuals who engage in self-regulated learning tend to experience positive effects and exhibit greater engagement in completing tasks, which in turn enhances their perception of schoolwork as more straightforward and manageable (Rahma & Affandi, 2022).

Sinnott (2008) posits that the experience of flow may be influenced by gender-specific learning styles and subject preferences. Males tend to experience flow in situations that involve cognitive challenge and competition, whereas females may experience more flow in situations that involve collaboration and social relationships. Additionally, Rose and Rudolph (2006) demonstrated that girls are more inclined to exhibit a high degree of emotional attachment than boys, who tend to prioritize shared activities. Furthermore, research has also investigated gender differences in self-regulated learning, indicating that women often demonstrate superior performance in specific self-regulated strategies, such as time management and note-taking, compared to men (Zimmerman & Martinez-Pons, 1990).

This present study is designed to examine the academic flow of students attending Muhammadiyah high schools across Yogyakarta, Indonesia. In particular, it aims to investigate the influence of peer attachment and self-regulated learning on the academic flow of students. Accordingly, the following hypotheses are posited: (1) peer attachment and self-regulated learning play a simultaneous role in the academic flow of Muhammadiyah high school students in Yogyakarta; (2) peer attachment positively affects the academic flow of Muhammadiyah high school students in Yogyakarta; and (3) Self-regulated learning positively affects the academic flow of Muhammadiyah high school students in Yogyakarta. Additionally, this study investigates the impact of gender on the aforementioned variables, specifically in relation to academic flow, peer attachment, and self-regulated learning.

2. Method

This research employed a quantitative methodology with a correlational design. Correlational research is employed to investigate and elucidate the interrelationship between two predictor variables and the dependent variable. In this research, the analysis was conducted using multiple linear regression analysis techniques, specifically focusing on the assumption test stage, which encompassed normality, linearity, and multicollinearity tests. Multiple linear regression analysis was employed to facilitate the measurement of the significance and strength of the relationship between variables and could assist in determining the relative contribution of each predictor variable to the dependent variable. Additionally, this study tested for the difference in variance between the male and female groups. In this study, the variance is defined as the difference between the male and female groups.

The study sample consisted of third-grade high school students from Muhammadiyah High Schools in Yogyakarta, Indonesia, with a total of 255 students. Stratified random sampling was employed as the sampling technique, whereby the research population was divided into subgroups or strata, and a random sample was then drawn from each stratum (Sugiyono, 2019). The sample size for this study was selected using the Krejcie table with a standard of 5%. To be included in the research sample, participants must meet the following criteria: (1) they must be currently enrolled as an active student in a Muhammadiyah high school in Yogyakarta; (2) they must be in their final year of high school; and (3) they must be willing to participate in the research.

In this study, variables were measured using three instruments, including Academic Flow Scale, Peer Attachment Scale, and Self-Regulated Learning Scale. The academic flow scale employed in this study was a modified version of a measurement instrument developed by Hastiana and Hidayah (2021), based on the theory of Salanova, et al. (2006). It comprises 20 items. The peer attachment scale was constructed by the researcher with reference to the theoretical framework established by Armsden and Greenberg (1987), comprising 13 items. Similarly, the self-regulated learning scale was also devised by the researcher based on the theoretical model proposed by Zumbunn, et al. (2011) which comprised 27 items.

Content validity was determined through the application of professional judgment to assess the items that have been prepared. In this study, three professional judgments were employed. The subsequent phase was establishing item criteria based on the total item correlation coefficient. The utilization of the threshold for the total item correlation coefficient was set at $(r_{it}) > 0,25$. In addition to establishing validity, a reliability test was performed to obtain valid and reliable measuring instruments. Periantalo (2019) asserted that a measuring instrument is deemed reliable if the Cronbach alpha value exceeds 0.80. Nevertheless, in a study, a Cronbach alpha value of 0.70 could be deemed satisfactory, signifying that 70% of the results were pure scores, while the remaining 30% represented errors resulting from measurements.

The total item correlation coefficient value for the academic flow scale was 0.270-0.764. The scale comprised 20 items, of which nine were favorable and 11 were unfavorable. The reliability coefficient for the scale was 0.721. The peer attachment scale exhibited a total item correlation coefficient value of 0.456-0.757, comprising 13 items, nine of which were favorable and four of which were unfavorable. The scale demonstrated a reliability coefficient value of 0.776, indicating a high degree of internal consistency. The total item correlation coefficient value for the self-regulated learning scale ranged between 0.326 to 0.711. The peer attachment scale comprised 27 items, of which 13 were favorable and 14 were unfavorable. The reliability coefficient for the self-regulated learning scale was 0.723.

3. Results and Discussion

The findings of this study yield data concerning the simultaneous impact of peer attachment and self-regulated learning on academic flow, along with the influence of peer attachment on academic flow, the effect of self-regulated learning on academic flow, and the beneficial contribution of peer attachment and self-regulated learning to academic flow.

3.1. Role of Peer Attachment and Self-Regulated Learning on Academic Flow

This research investigates the role of peer attachment and self-regulated learning on academic flow, while the results are presented in Table 1. The score presented in Table 1 indicates the multiple correlation coefficient (R) of 0.603. The multiple correlation coefficient (R) quantifies the degree of interdependence between predictor variables and the dependent variable. Therefore, the R-value of 0.603 indicates a relatively strong correlation between the three variables. Meanwhile, the coefficient of determination (R^2) of 0.364, indicates that 36.4% of the model can be used to explain the total variation in the data. Further, the obtained p-value of 0.000 ($p < 0.01$) suggests that the statistical test results are highly significant, as the p-value is considerably smaller than 0.01. Thus, the variables of peer attachment and self-regulated learning have a highly significant effect on academic flow in students at Muhammadiyah High Schools in Yogyakarta, Indonesia.

Table 1. Role of Peer Attachment and Self-Regulated Learning on Academic Flow

F	R	R Square	Sig (p)	Description
63.424	0.603	0.364	0.000	Highly significant

Ainley (2006) posits that peer attachment can serve as a crucial source of social support for students. Such support can enhance self-confidence and promote satisfaction with the learning process, which is a crucial element in fostering optimal conditions for academic flow. Therefore, the formation of study groups, collaborative activities, or extracurricular activities that can reinforce emotional attachment between peers will, in turn, facilitate the learning process. Meanwhile, the influence of self-regulated learning on academic flow and its relationship with aspects of intrinsic motivation—particularly, the student's capacity to gain deep understanding and satisfying achievements—necessitates further investigation. These students naturally feel interested and involved in their learning activities (Pintrich & De Groot, 1990). Students who employ self-regulated learning strategies, such as planning, monitoring, and continuous adjustment in their learning, tend to demonstrate a higher level of engagement in the learning process. This facilitates a state of flow, wherein students perceive that their learning challenges and skills are optimally aligned (Pintrich, et al., 1991).

3.2. Role of Peer Attachment on Academic Flow

The role of peer attachment on academic flow was analyzed and the results are presented in Table 2. As illustrated in Table 2, the beta value is 0.124, with a t-value of 2.189 and a significance level of 0.030 ($p < 0.05$). The beta value of 0.124 indicates the standardized regression coefficient (beta) of the peer attachment variable. The beta value demonstrates the magnitude of the influence of peer attachment on academic flow, which is 0.124. The beta value indicates a positive influence, although the effect is relatively minor.

Table 2. Role of Peer Attachment on Academic Flow

Variable	Beta	t	Sig (p)	Description
Peer attachment	0,124	2,189	0,030	Significant

In order to ascertain the impact of peer attachment on academic flow, the t value of 2.189 was employed. The p-value of the t-test is 0.030, which is less than 0.05, indicating that the variable of peer attachment has a significant effect on academic flow. Therefore, it can be posited that peer attachment plays a pivotal role in fostering positive academic outcomes. Consequently, an increase in the level of peer attachment will lead to an enhancement in academic flow among students at Muhammadiyah High School across Yogyakarta, Indonesia.

Attachment engenders a favorable experience that exerts an influence on individual growth (Mu'arifah, 2020). Peer attachment facilitates the sharing of information concerning the world outside the family environment with a peer. Such experiences afford students the opportunity to gain insight into a multitude of subjects beyond the confines of their domestic environment (Nastiti & Cahyani, 2022). Students may establish a conducive environment for the completion of assignments or the academic process in general. A sense of comfort from peers allows individuals to perceive the task at hand as something to be done collectively, thereby reducing the sense of burden (Prihandrijani, 2016). This subsequently affects students' academic activities, whereby academic assignments can be completed in a satisfactory manner with a sense of security and comfort. The findings of this study are in accordance with those of Ramadina, et al. (2022), which indicate a positive relationship between peer attachment and academic flow. Accordingly, a higher level of peer attachment leads to higher academic flow.

3.3. Role of Self-Regulated Learning on Academic Flow

The role of self-regulated learning on academic flow was observed, and the results are presented in Table 3. As illustrated in Table 3, the obtained value is 0.552, with a (t) value of 9.779 and a significance level of 0.000. The beta value of 0.552 represents the standard regression coefficient (beta) of the self-regulated learning variable. This beta value indicates a notable positive influence of the self-regulated learning variable on the academic flow. Meanwhile, a t-value of 9.779 represents the outcome of the t-test, which was employed to ascertain the significance of the beta coefficient.

The t-value of 9.779 indicates that the beta coefficient is highly statistically significant. Moreover, the 0.000 significance value indicates that the t-test results are highly significant. Given that the p-value is considerably less than 0.05, it can be concluded that the impact of the self-regulated learning variable on the academic flow variable is highly significant. Therefore, self-regulated learning plays a pivotal role in enhancing academic flow. The findings indicate that self-regulated learning has a markedly positive influence on academic flow, suggesting that an increase in self-regulated learning leads to a corresponding rise in academic flow among students at Muhammadiyah High School in Yogyakarta, Indonesia.

Table 3. Role of Self-Regulated Learning on Academic Flow

Variable	Beta	t	Sig (p)	Description
Self-Regulated Learning	0,552	9,779	0,000	Very significant

Delfino (2011) posits that self-regulated learning enables students to identify their own strengths and weaknesses, foster self-development, and employ a range of strategies to achieve their academic goals. The findings of this research indicate that self-regulated learning, which essentially entails the formulation of objectives, the monitoring of progress, and the implementation of strategies, has the potential to markedly enhance academic performance, thereby fostering a sense of enjoyment and engagement in the learning process (Csikszentmihalyi, 1990; Zimmermen, 2000). The findings of this study are corroborated by prior research conducted by Rahma and Affandi (2022), which indicates that self-regulated learning exerts a beneficial influence on academic flow. This implies that as students' self-regulated learning proficiency improves, their academic flow tends to enhance as well. The findings of a study from Usman, et al (2023) align with those of previous research, indicating that a high level of self-regulated learning is associated with a high level of academic flow, and vice versa. Hidayah (2020) also supports the hypothesis that self-regulated learning has a positive relationship with academic flow.

3.4. The Effective Contribution of Peer Attachment and Self-Regulated Learning to Academic Flow

The analysis of the effective contribution of peer attachment variables to academic flow yielded a result of 3.70%. The contribution of the self-regulated learning variable to academic flow was found to be 32.67%. Based on these results, the peer attachment variable has been observed to exert a comparatively minor influence on the academic flow variable, whereas the total contribution of the two independent variables to the dependent variable—namely, peer attachment and self-regulated learning—was determined to be 36.37%.

The notable discrepancy in the effective contribution between peer attachment and self-regulated learning to academic flow aligns with the findings of Wigfield, et al. (2006), which indicate that peer attachment plays a pivotal role in fostering students' social and emotional engagement within the school environment. However, its impact on academic flow is not as pronounced as that of self-regulated learning. Peer attachment is more closely associated with social and emotional factors than with the cognitive abilities required to achieve flow. The research from Pintrich (2004) indicates that although social support from peers can enhance motivation and foster a sense of attachment to school, the capacity to self-regulate in the context of learning is a more direct predictor of academic flow.

Self-regulated learning is a critical factor in academic success, as it enables students to assume control of their learning process, enhance their intrinsic motivation, focus on the task at hand, and facilitate their learning flow (Zimmerman, 2008). Moreover, the findings of the study conducted by Dinsmore and Alexander (2012) indicated that students who exhibited proficiency in self-regulated learning were more likely to experience academic flow. Self-regulated learning enables students to set goals, monitor their progress, and adjust their learning strategies, all of which contribute to the experience of flow. Another study that corroborates the findings of this research is a study by Kuo and Hwang (2014), which reports a positive correlation between self-regulated learning and the experience of academic flow in students engaged in online studies. This finding suggests that the capacity for self-regulation is a crucial factor in attaining optimal learning outcomes, even in the absence of direct interaction with peers.

3.5. Difference test based on gender

In this study, the total number of male subjects was 118, with a mean value of 38.85, and the number of female subjects was 137, with a mean value of 39.99. A T-test was conducted following the rule of homogeneity ($p > 0.05$) to obtain the significance value (Sig) of each variable. The Sig value for academic flow was 0.367 ($p > 0.05$), indicating homogeneous results. In contrast, the significance value for peer attachment is 0.008 ($p < 0.05$), indicating that the data set is not homogeneous. The sig value on self-regulated learning is 0.762 ($p < 0.05$), showing homogeneous results. Homogeneous and non-homogeneous conclusions dictate further analysis stage. If the conclusion is homogeneous, further analysis of variant differences can be conducted; conversely, if the conclusion is non-homogeneous, further analysis is unnecessary.

Table 4. Results of Difference Test based on Gender

Variable	Sig. (2-tailed)	Mean Difference	Lower	Upper
Academic Flow	0.089	1.625	-0.251	3.502
Peer Attachment	0.097	-1.137	-2.482	0.207
Self-Regulated Learning	0.003	-3.719	-6.138	-1.299

The two-tailed test yielded a p-value of $0.089 > 0.05$. This indicates that there is no statistically significant difference in academic flow based on gender in this study. Peer attachment is known to have a significance level of 0.097, which is greater than 0.05. This implies the absence of significant differences in peer attachment based on gender. The results indicate a statistically significant difference in self-regulated learning based on gender, with a p-value of $0.003 < 0.05$. The mean difference value for self-regulated learning is -3.719. This value represents the mean difference between women and men, which is $78.913 - 82.631 = -3.719$. Additionally, the variance difference is -6.138 (lower) to -1.299 (upper) (95% Confidence Interval of the Difference, Lower Bound, Upper Bound).

The t-test on the self-regulated learning variable indicates a statistically significant difference in self-regulated learning between women and men. The results indicate that women exhibit higher levels of self-regulated learning than men. This finding aligns with prior research indicating gender differences in self-regulated learning, with women exhibiting superior performance compared to men (Saputra, et al., 2018).

This notable discrepancy is elucidated by Zimmerman and Martinez-Pons (1990), who posit that female students are more inclined to engage in self-monitoring, goal-setting, planning, and structuring their learning environment in comparison to their male counterparts. Bodjerano (2005) further postulates that women tend to engage in more reflective learning, enabling them to discern the diverse strategies they employ and assess their comprehension of the learning process.

Female students demonstrate superior cognitive awareness, which is the capacity to reflect on their own cognitive processes and learning. This enables them to more effectively identify and address learning challenges, such as seeking additional resources or modifying study strategies. In contrast, male students tend to prioritize task completion over reflection or self-evaluation. This could signify that they are less conscious of the optimal time to alter their study strategies or take corrective action when confronted with challenges. This offers educators the opportunity to develop learning strategies that are more aligned with the distinct needs of each gender. For instance, male students may require additional guidance to enhance their reflection and study planning abilities, whereas female students may benefit from strategies that reinforce existing skills, such as improving planning efficiency or time management.

4. Conclusion

The primary findings of this study indicate that peer attachment and self-regulated learning exert a profound influence on academic flow among students at Muhammadiyah High Schools across Yogyakarta, Indonesia. Peer attachment has a significant positive impact on the academic flow of students. Meanwhile, self-regulated learning has a very significant positive influence on the academic flow of students. It is evident that self-regulated learning contributes more than peer attachment. In order to enhance peer attachment, schools may consider directing students to engage in extracurricular activities such as scouts, sports, and other extracurricular pursuits. Additionally, future re-

searchers may employ diverse analytical techniques, as it is postulated that the self-regulated learning variable may act as a moderator variable.

Author Contributions

Kartika: Conceptualization, Methodology, investigation, formal analysis, writing – original draft preparation, writing – reviews & editing. Mu'arifah: conceptualization, supervision, writing – review & editing, validation

Funding

No funding support was received.

Declaration of Conflicting Interests

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

References

- Ainley, M. (2006). Connecting with learning: Motivation, affect and cognition in interest processes. *Educational Psychology Review*, 18(4), 391–405. <https://doi.org/10.1007/s11031-010-9195-4>.
- Amira, R. d., & Muhid, A. (2020). Self-Regulated Learning, Self-esteem, Dukungan Sosial dan Flow Akademik. *Indonesian Psychological research*, 2(2), 65–74. <https://doi.org/10.29080/ipr.v2i2.393>
- Armsden, G.C., & Greenberg, M.T. (1987). The Inventory of Parent and Peer Attachment: Individual Differences and Their relationship to Psychological Well-Being in Adolescence. *Journal of Youth and Adolescence*. 16(5), 427–454
- Barrett, T. (2010). The problem-based learning process as finding and being in flow. *Innovations in Education and Teaching International*, 47(2), 165–174.
- Baumann, N., & Scheffe R, D. (2010). Seeking flow in the achievement domain: The achievement flow motive behind flow experience. *Journal Motivation and Emotion*, 35 (3), 267–284. <https://doi.org/10.1007/s11031-010-9195-4>.
- Bidjerano, T. (2005). Gender differences in self-regulated learning. *Paper presented at the Annual Meeting of the Northeastern Educational Research Association*, October 19–21, Kerhonkson, NY, USA
- Bowlby, J. (1982). Attachment and loss: Retrospect and prospect. *American Journal of Orthopsychiatry*, 52(4), 664–678. <https://doi.org/10.1111/j.1939-0025.1982.tb01456.x>
- Csikszentmihalyi. (1990). *Flow: The Psychology of Optimal Experience*. New York: Harper & Row, Publisher
- Delfino, M. & Persico, D. (2011). Self-Regulated Learning. In I. Management Association (Ed.), *Instructional Design: Concepts, Methodologies, Tools and Applications* (359–374). IGI Global. <https://doi.org/10.4018/978-1-60960-503-2.ch211>
- Dinsmore, D. L., & Alexander, P. A. (2012). A critical discussion of deep and surface processing: What it means, how it is measured, the role of context, and model specification. *Educational Psychology Review*, 24(4), 499–567. <https://doi.org/10.1007/s10648-012-9198-7>
- Eccles, J. S. (1994). Understanding women's educational and occupational choices: Applying the Eccles et al. model of achievement-related choices. *Psychology of Women Quarterly*, 18(4), 585–609. <https://doi.org/10.1111/j.1471-6402.1994.tb01049.x>
- Hidayah, N., M. (2020) Hubungan antara Iklim dan Self-regulated Learning dengan Flow Akademik pada Siswa Sekolah Menengah Pertama (Skripsi Fakultas Psikologi, Universitas Ahmad Dahlan Yogyakarta). *Eprints.uad.ac.id* <https://eprints.uad.ac.id/17227/1/upload%20naskah%20publikasi.pdf>
- Kuo, Y.-C., & Hwang, G.-J. (2014). A hybrid approach to promoting students' web-based problem-solving competence and learning attitude. *Computers & Education*, 71, 33–41. <https://doi.org/10.1016/j.compedu.2013.09.013>
- Magfiroh, A., Sumiati, A., & Zulaihati, S. (2022). Pengaruh Self-Regulated Learning, Lingkungan Teman Sebaya dan Task Aversiveness terhadap Prokrastinasi Akademik pada Mahasiswa S1 Program Studi kependidikan 2018 fakultas Ekonomi Universitas Negeri Jakarta. *Indonesian Journal of Ekonomi, Business, Entrepreneurship and Finance*, 2(1), 69–75. <https://doi.org/10.53067/ijebe>
- Mu'arifah, A., Muyana, S., Nanda, E. S. W., & Sehu, M, Z. (2020). Pengaruh Attchment dan Harga Diri terhadap Regulasi Emosi Siswa. *Jurnal Kajian Bimbingan dan Konseling*, 5(1), 9–17. <https://doi.org/10.17977/um001v5i12020p009>
- Nastiti, D., & Cahyani, C. N. (2022). Dukungan Sosial Teman Sebaya dan Flow Akademik pada Mahasiswa Psikologi Universitas Muuhammadiyah Sidoarjo. HELPER: *Jurnal Bimbingan dan Konseling*, 39(1), 13–21. <https://www.semanticscholar.org/reader/e6f3e062c103c5a4a2b706150057368b2359e57b>
- Paryontri, R.A., Affandi, G. R., & Suprpti, S. (2021) Peran School well-Being pada Flow Akademik Siswa Sekolah Menengah Pertama. *PSIKODIMENSIA Kajian Ilmiah Psikologi*, 20(2), 196–206. <https://doi.org/10.24167/psidim.v20i2.3708>
- Periantolo, J. (2019). *Penelitian Kuantitaif untuk Psikologi*. Yogyakarta: Pustaka Pelajar

- Pintrich, P. R. (2004). A conceptual framework for assessing motivation and self-regulated learning in college students. *Educational Psychology Review*, 16(4), 385–407. <https://doi.org/10.1007/s10648-004-0006-x>
- Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology*, 82(1), 33–40. <https://doi.org/10.26858/jppk.v6i1.10792>
- Pintrich, P. R., Smith, D. A. F., Garcia, T., & McKeachie, W. J. (1991). A manual for the use of the Motivated Strategies for Learning Questionnaire (MSLQ). National Center for Research to Improve Postsecondary Teaching and Learning, University of Michigan. https://www.researchgate.net/publication/271429287_A_Manual_for_the_Use_of_the_Motivated_Strategies_for_Learning_Questionnaire_MSLQ
- Prihandrijani, E. (2016). *Pengaruh Motivasi berprestasi terhadap Flow Akademik pada siswa SMA X di Surabaya*. (Tesis Universitas Airlangga, Surabaya, Indonesia). <https://repository.unair.ac.id/46847/>
- Rahma, K.A., & Affandi, G. R. (2022). The Relationship Between Akademik Regulated And Akademik Flow In Junior High School Students. *Academia Open*, 6. <https://doi.org/10.21070/acopen.6.2022.2693>
- Ramadina, M., Rusli, R., & Achmad, R. (2022). Hubungan Antara Kelekatan Teman Sebaya dengan Flow Akademik pada Siswa Menengah Atas. *Didaktika: Jurnal Kependidikan*, 16(2), 145–156. <https://doi.org/10.30863/didaktika.v16i2.3194>
- Rohmatul, M., & Jainudin, J. (2019). Peer attachment dan student engagement pada siswa pondok pesantren. *Jurnal Penelitian Psikologi*, 10(2), 44–50. <https://doi.org/10.29080/jpp.v10i2.239>
- Rose, A. J., & Rudolph, K. D. (2006). A review of sex differences in peer relationship processes: Potential trade-offs for the emotional and behavioral development of girls and boys. *Psychological Bulletin*, 132(1), 98–131.
- Salanova, M., Bakker, A. B., & Llorens, S. (2006). Flow at work: Evidence for an upward spiral of personal and organizational resources. *Journal of Happiness Studies*, 7(1), 1–22. <https://doi.org/10.1007/s10902-005-8854-8>
- Santrock, J. W. (2012). *Perkembangan Masa-Hidup edisi ketigabelas jilid 1*. Erlangga
- Saputra, W. N. E., Alhadi, S., Supriyanto, A., Woretina, C. D., Baqiyatussolihat. B. (2018). Perbedaan Self-Regulated Learning Siswa Sekola Menengah Kejuruan Berdasarkan Jenis Kelamin. *Jurnal Kajian Bimbingan dan Konseling*, 3(3), 131–138 <https://doi.org/10.17977/um001v3i32018p131>
- Shermoff, D. J., & Hoogstra, L. (2001). Continuing motivation beyond the high school classroom. *New Directions for Child and Adolescent Development*, 2001(93), 73–87. <https://doi.org/10.1002/cd.26>
- Shermoff, D. J., Csikszentmihaly, M., Schneider, B., & Shermoff, E. S. (2003). Students Engagement in High School Classrooms from the Perspective of Flow Theory. *School Psychology Quarterly*, 18(2), 158–176.
- Sinnott, J. D. (2008). *Developmental Theories Through the Life Cycle*. John Wiley & Sons.
- Sugiyono. (2019). *Metode Penelitian dan pengembangan (Research and development/ R&D)*. Bandung: Alfabeta
- Usman, N. R., Lukman, & Akmal. N. (2023). Peran Regulasi Diri Belajar terhadap Flow Akademik pada Mahasiswa yang sedang Mengerjakan Skripsi. *Psikoislamika: Jurnal Psikologi Islam*, 20(1), 538–549. <https://doi.org/10.18860/psikoislamika.v20i1.18077>
- Wigfield, A., & Eccles, J. S. (2000). Expectancy-value theory of achievement motivation. *Contemporary Educational Psychology*, 25(1), 68–81. <https://doi.org/10.1006/ceps.1999.1015>
- Wigfield, A., Byrnes, J. P., & Eccles, J. S. (2006). Development during early and middle adolescence. In P. A. Alexander & P. H. Winne (Eds.), *Handbook of Educational Psychology* (pp. 87–113). Mahwah, NJ: Lawrence Erlbaum Associates.
- Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation Academic Press*. (13–39). <https://doi.org/10.1016/B978-012109890-2/50031-7>
- Zimmerman, B. J. (2008). Investigating self-regulation and motivation: Historical background, methodological developments, and future prospects. *American Educational Research Journal*, 45(1), 166–183. <https://doi.org/10.3102/0002831207312909>
- Zimmerman, B. J., & Martinez-Pons, M. (1990). Student differences in self-regulated learning: Relating grade, sex, and giftedness to self-efficacy and strategy use. *Journal of Educational Psychology*, 82(1), 51–59. <https://doi.org/10.1037/0022-0663.82.1.51>
- Zimmerman, B.J (1989). A Social Cognitive View of Self-Regulated Akademik Learning. *Jurnal of Educational Psychology*, 81(3), 329–339. <https://doi.org/10.1037/0022-0663.81.3.329>
- Zumbrunn, S., Tadlock, J., & Roberts, E. D. (2011). Encourage Self-regulated Learning in the Classroom.