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Analys of academic flow, digital literacy and self-regulated learning on academic achievement

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ABSTRACT

The success of learning can basically be seen from the high and low learning outcomes. This research aims to determine the influence of academic flow, digital literacy and self-regulated learning on the academic achievement of Siliwangi Tasikmalaya University students. This research uses an explanatory survey method with a quantitative approach, the population in this research are Siliwangi Tasikmalaya University students class 2018-2021. Sampling in this study used a purposive random sampling technique with a total of 387 students as respondents. The data collection technique uses a questionnaire and the data analysis technique used is multiple linear regression analysis. The research results show that academic flow has a significant effect on student academic achievement, digital literacy has a significant effect on student academic achievement, self-regulated learning has no effect on student academic achievement, academic flow, digital literacy and self-regulated learning simultaneously influence student academic achievement. The coefficient of determination shows that academic flow, digital literacy and self-regulated learning together influence student academic achievement by 8.2 percent and the remaining 91.8 percent is influenced by other factors that are not included careful in this research.

INTRODUCTION

Higher Education Institutions (HEIs) is one of the formal educational institutions that has an important role in creating quality human resources. This role makes each university have a vision to produce superior graduates in the form of competent workers and experts in accordance with their respective fields and expertise. The real form of realizing this is done through effective and quality learning with the hope of achieving learning objectives in the form of learning outcomes or student academic achievements expressed in the form of a cumulative achievement index (GPA). Based on data from the Siliwangi University strategic plan document for 2020-2024, the percentage of GPA achieved by graduates of 12,312 Siliwangi University students for 2015-2019 shows that the majority of Siliwangi University graduates in 2015-2019 graduated with good academic achievements, although there were still students who graduated with GPA in the minimum graduation standard range in accordance with academic guidelines. As for the academic achievements of students from the 2018-2021 class, the majority of students have good academic achievements, where of the 75 students, 71% obtained an odd semester GPA for the 2021/2022 academic year above 3.51, although each semester period often experiences increases and decreases in GPA. According to Parnawi (2020), obtaining a high GPA is of course influenced by various factors, both internal and external factors such as concentration power, own initiative in learning, intelligence and ability.

In academic activities, the power of intense concentration according to Csikszentmihalyi (2014) results in a person entering a state of flow or in learning what is called academic flow. Academic flow is a concept that explains the condition of a person being fully involved, lost and focused on academic activities. This condition helps students to understand the material being studied well so that they can improve academic achievement, this is in line with research by Borovay et al. (2019) which states that students with high abilities and achievements are students who most experience flow in learning. When studying and carrying out academic activities, not all students can experience flow, of the 75

undergraduate students at Siliwangi University class of 2018-2021, it shows that only 25% of students often experience flow in academic activities, while 75% of students sometimes cannot even concentrate fully. understand and master the material studied during lectures and carry out academic activities.

The second factor in learning success or student academic achievement is their own initiative in learning, this is because the learning pattern in higher education requires students to play an active role, so students must have the ability to self-regulate learning in the form of self -regulated learning. Self-regulated learning is a concept that describes a person's ability to play an active role in organizing or managing learning activities. Self-regulated learning helps students organize academic activities to achieve academic achievement. This is in line with the opinions of Gettinger and Seibert, Pintrich and Schunk, Weinstein et al in Cleary and Zimmerman's research quoted by Kristiyani (2016) who stated that low self-regulation is an important factor that influences low academic achievement. To implement self-regulated learning in academic activities, some students still find it difficult. Of the 75 undergraduate students at Siliwangi University class of 2018-2021, they stated that 31% of students can regulate themselves in carrying out academic activities, while 69% of students sometimes and cannot even regulate themselves to create study strategies and are unable to manage time well for studying or carrying out academic activities.

Apart from academic flow and self-regulated learning, currently, to achieve academic achievement, students can utilize internet technology and various digital platforms to support academic activities to obtain knowledge, especially during distance learning over the last two years, the implementation of which cannot be separated from the use of digital technology. . This use must be accompanied by digital literacy skills. Digital literacy is a concept that describes a person's ability to use information and communication technology devices to search for, understand content, create, disseminate and evaluate information. The concept of digital media literacy according to Effendi et al. (2019) is attached by UNESCO to the idea of Education for Sustainable Development to create a knowledgeable society, values and their implementation must be integrated into all aspects of education and learning in order to increase learning achievement.

Shopova (2014) in her research explains that in general students who enter university already have skills in using social networks, e-mail or Skype, surfing the internet and being active in cyberspace, but regarding the knowledge and ability to use technology effectively to Learning is often low, students do not have appropriate skills in using the internet and information technology when solving scientific problems in working on assignments individually or in groups. Of the 75 undergraduate students at Siliwangi University class of 2018-2021, 93% of students can use internet technology to support their studies, however, in its use, 91% of students sometimes use it more often for playing on social media than for academic activities. This research aims to determine the influence of academic flow, digital literacy and self-regulated learning on the academic achievement of Siliwangi Tasikmalaya University students.

RESEARCH METHODS

This research is quantitative research with a causal explanatory survey method. The population in this study were 387 Siliwangi University students from the 2018-2021 class. The sample in this study was taken using a purposive random sampling technique, namely random sampling with certain criteria. These criteria include active D3 and S1 students from the 2018-2021 class because they have studied for at least one semester with the aim of obtaining academic achievement results (GPA), as well as students who have or often use digital technology for academic activities so that the data obtained is appropriate and can support the research being carried out.

Research data collection used a questionnaire containing GPA questions to measure student academic achievement, as well as a number of statements to measure student academic flow, digital literacy and self-regulated learning using a 4-level Likert scale and eliminating middle (neutral) answers. The data obtained from the questionnaire was subjected to multiple linear regression analysis with the help of IBM Statistics SPSS 25 software

RESULTS AND DISCUSSION

In this research, the results of data processing and analysis based on the processed questionnaire show that the academic achievement of D3 and S1 level students at Siliwangi University class of 2018-

2021, most of the students have very high academic achievement with details per category in the following table:

Table 1 Student GPA Categories Based on Graduation Predicate

GPA Interval	F	(%)	Predicate
2,00 - 2,75	0	0,00%	Passed
2,76 - 3,00	0	0,00%	Satisfying
3,01 - 3,50	91	23.51%	Very Satisfactory
≤ 3,50	296	76.49%	With Compliments
Total	**387**	**100%**	

The level of student academic flow from all respondents' answers obtained a score of 18,319 and based on the calculation of interval level values (NJI) it is included in the medium category. The frequency distribution of academic flow can be seen in the following table:

Table 2 Distribution of Academic Flow Categorization

Interval	F	(%)	Category
≤39,1215	24	6,20%	Very Low
39,1216-44,6005	87	22,48%	Low
44,6006-50,0795	189	48,84%	Medium
50,0796-55,5585	54	13,95%	Tall
>55,5585	33	8,53%	Very High

For the level of digital literacy of students in academic activities, from all respondents' answers, a score of 44,860 was obtained and based on the interval level score (NJI) calculation, it is included in the medium category. The frequency distribution of digital literacy can be seen in the following table:

Table 3 Distribution of Digital Literacy Categorization

Interval	F	(%)	Category
≤96,900	14	3,62%	Very Low
96,901-109,580	136	35,14%	Low
109,581-122,260	131	33,85%	Medium
122,261-134,940	62	16,02%	Tall
>134,940	44	11,37%	Very High

Meanwhile, the level of student self-regulated learning from all respondents' answers obtained a score of 37,670 and based on the calculation of interval level values (NJI), it is included in the medium category. The frequency distribution of self-regulated learning can be seen in the following table:

Table 4 Distribution of Self-Regulated Learning Categorization

Interval	F	(%)	Category
≤80,041	19	4,91%	Very Low
80,042-91,574	83	21,45%	Low
91,575-103,107	184	47,55%	Medium
103,108-114,640	61	15,76%	Tall
>114,64	40	10,34%	Very High

Before carrying out an analysis to determine the influence of academic flow, digital literacy and self-regulated learning on student academic achievement, it is first necessary to test the analytical requirements with the results: 1) by looking at the normal graph P-P plot of regression standardized residual data is normally distributed because the points on the graph are spread around the line and follow the diagonal line; 2) independent variable in this study has a linear relationship to the dependent variable with a significance value of deviation from linearity of more than 0.05, where academic flow is 0.504, digital literacy is 0.308 and self-regulated learning is 0.972; 3) there is no multicollinearity

between independent variables because the VIF value is smaller than 10 and the tolerance value is more than 0.1, where academic flow has a VIF value of 2.046 and tolerance 0.489, digital literacy has a VIF value of 2.359 and tolerance 0.424 and self-regulated learning has a VIF value 2.599 and tolerance 0.385; 4) by looking at the Scatterplot Regression Standardized Residual graph, heteroscedasticity does not occur because the points on the graph are spread above and below the number 0 on the Y axis.

To find out whether there is an influence and how big the influence of academic flow, digital literacy and self-regulated learning on academic achievement, a multiple linear regression was carried out with the following results:

Table 5 Multiple Linear Regression

Model		Unstandarized Coefficient		Standarized Coefficient		
		B	**Std. Error**	**Beta**	**T**	**Sig**
1	(Constant)	3.241	.071		45.367	.000
	Flow Akademik	.004	.002	.164	2.348	.019
	Literasi Digital	.002	.001	.206	2.739	.006
	Self-Regulated Learning	-.001	.001	-.069	-.870	.385

a. Dependent Variable: Prestasi Akademik

Based on the Coefficients results in table 5 of the partial hypothesis test, it can be concluded that the t value for academic flow is 2.348, which is greater than the t table value, which is 1.966 with a significance value of 0.019, so it can be concluded that academic flow has an influence on the academic achievement of students at the D3 and S1 education levels at Siliwangi University. 2018-202. The calculated t value for digital literacy is 2.739, which is greater than the t table value, which is 1.966 with a significance value of 0.006, so it can be concluded that digital literacy has a significant effect on the academic achievement of D3 and S1 students at Siliwangi University class of 2018-2022. The self-regulated learning t-value is -0.870, which is smaller than the t-table value, which is 1.966 with a significance value of 0.385, so it can be concluded that self-regulated learning has no effect on the academic achievement of students at the D3 and S1 education levels at Siliwangi University class of 2018-2021.

The Influence of Academic Flow on Student Academic Achievement

Academic flow is a condition that shows a person is drifting, focused and enjoying academic activities carried out because of motivation, a sense of comfort and pleasure in carrying out these activities. Academic flow in students can occur due to intense concentration as mentioned by Csikszentmihalyi. Students who experience a flow state will focus all their attention on what they are doing and studying happily and comfortably. Comfort in carrying out academic activities can make it easier for students to understand what they are studying, thereby increasing students' knowledge, understanding and academic achievement.

Based on the research results that have been analyzed, it shows that there is an influence of academic flow on the academic achievement of students at the D3 and S1 education levels at Siliwangi University class of 2018-2021. The results of the research show that the majority of students have quite good academic flow, this is explained based on findings in the field. The highest score for academic flow is on the intrinsic motivation indicator, where the majority of students study not only to get grades, but to increase and develop knowledge, abilities and skills possessed, and the majority of students stated that they studied for their own needs because what they learned would be useful for themselves.

Findings in the field also show that the majority of students are enthusiastic about participating and can enjoy lectures to achieve their desired goals, one of these goals can be obtaining a high GPA. This condition shows that academic flow is an important asset for students to make it easier to understand the material being studied because students try to concentrate and enjoy the academic activities they are carrying out, so that this condition is able to increase students' knowledge, understanding and academic achievement. This is in line with the opinion of Aini & Fahriza (2020) that the existence of flow in academic activities has a positive impact and is able to bring benefits to improving learning achievement because during learning students can focus and feel comfortable understanding what they are learning.

The results of this research are in line with research conducted by Erma Ro'idhotul (Jannah, 2020) with the results of academic flow research having a positive correlation or relationship with learning achievement in Islamic religious education (PAI).

The Effect of Digital Literacy on Achievement Student Academics

Digital literacy in academic activities is the ability and skills to use and operate various digital technologies to search for, understand content, create, disseminate and evaluate information into knowledge. Currently, obtaining information and learning materials can be accessed easily by utilizing digital media, but its use must be accompanied by digital literacy skills, so that with these abilities students will utilize and use digital media and platforms wisely to support academic activities such as studying. and do academic assignments.

Based on the research results that have been analyzed, it shows that there is an influence of digital literacy on the academic achievement of students at the D3 and S1 education levels at Siliwangi University, the highest score for digital literacy is in the central competencies indicator (Main Competencies/ICT Skills), where the majority of students can use communication media and digital platform for exchanging messages, discussions, participating in learning and supporting academic activities. In this case, this means that most students are able to use and utilize various platforms or digital media to support academic activities such as searching for and sharing information, studying, doing assignments, presentations, discussions and other academic activities, so that they can encourage academic achievement.

This is in line with Dinata (2021) statement in her research that with digital literacy students can search and filter information, understand, communicate and convey ideas in digital space, and can provide opportunities for students to think, communicate and produce unique work. ends in student learning success.

The Effect of Self-Regulated Learning on Student Academic Achievement

Self-regulated learning is a person's ability to mobilize thoughts, feelings and actions to play an active role in managing learning activities or academic activities in order to achieve set goals. Self-regulated learning according to Bell and Akroyd quoted by Ellianawati in (Surindra & Bakti, 2018) self-regulated learning is part of cognitive learning which can influence learning achievement by regulating and monitoring behavior, motivation and the learning environment.

Based on the results of research on D3 and S1 students at Siliwangi University class of 2018-2021, it shows that self-regulated learning does not have a significant effect on students' academic achievement partially. The results of this research contradict the results of previous research conducted by Pamungkas (2020) which showed that there was an influence between the level of self-regulated learning on student achievement index. However, the results of this research are in line with research conducted by Saraswati (2017) which shows that self-regulated learning strategies have no relationship with students' GPA.

Based on field findings, this condition can occur in this research due to the influence of various factors. The research results show that the lowest score for the self-regulated learning indicator is in the metacognitive (metacognitive) sub-indicator of organization, where some students have not been able to explain the material and make charts and diagrams. or simple tables to help organize the material, and some students also tend not to have the will to study and understand new material before the lecture and find out for themselves if they feel they don't understand the material being studied.

In this case, this means that during lectures some students are unable to describe and organize the material being studied and more often rely or depend on the material provided by the lecturer rather than studying independently, so that most students need the help of lecturers or friends to gain knowledge. This condition is in line with the statement of Ranti, Budiarti and Trisna (in Zainudin, 2021) in their research which states that during lectures students tend to depend more on the material provided by the lecturer and students tend to experience difficulties without help or guidance from the lecturer to understand definitions, work on and develop his thinking ability in solving problems, especially those related to theorems in the algebraic structure course.

Field findings also show that the lowest score for the self-regulated learning indicator is in the behavior indicator, time/study environment sub-indicator, which shows that there are still students who tend to only study during lectures and do not have a fixed study schedule. Apart from that, self-regulated

learning in this research has no effect on academic achievement because to achieve academic achievement, each student has different learning methods, methods and strategies due to certain conditions, such as the learning methods used by students in certain study programs will be different from the methods used by students in certain study programs. studying other study programs, or students will use different learning strategies when studying different subjects. This is in line with Ajisuksmo's statement in Supriyanto (2017) which explains that an important component of self-regulated learning is the student's perception or view of what is being studied, each student has a different perception of the learning process, so that the learning methods or strategies used Every student will be different, this means students may use different learning strategies in the same situation, but other students will use different learning strategies in different situations.

The Influence of Academic Flow, Digital Literacy and Self-Regulated Learning on Student Academic Achievement

Student academic achievement is basically influenced by many factors, in Bandura's social cognitive theory learning is influenced by behavioral, environmental and person (cognitive) factors, where these three factors are internal factors and external factors in learning. A small number of internal factors that can influence whether academic achievement is achieved or not include academic flow, digital literacy and self-regulated learning. These three factors are related to the form of learning application of Bandura's social cognitive theory through the cognitive behavioral and self-regulation approaches proposed by Santrock in Asmendri & Sari (2018), where cognitive behavior and self-regulation are how students manage, organize and monitor their own thoughts, feelings and behavior to achieve a goal.

Based on the results of research on students at the D3 and S1 education levels at Siliwangi University class of 2018-2021, it shows that academic flow, digital literacy and self-regulated learning together (simultaneously) influence academic achievement with a significance level of 0.000 < 0.05 and a t-count value 11,344 > ttable 2,628. The results of the coefficient of determination obtained an R square value of 0.082, meaning that academic flow, digital literacy and self-regulated learning have an influence of 8.2% on student academic achievement, while the remaining 91.8% is influenced by other factors that have not been researched and explained. in this research.

CONCLUSION

Based on the research results, the following conclusions were obtained that academic flow has a significant positive effect on the academic achievement of students at the D3 and S1 education levels at Siliwangi University class of 2018-2021. Digital literacy has a significant positive effect on the academic achievement of students at the D3 and S1 education levels at Siliwangi University class of 2018-2021. Self-regulated learning has no significant effect on the academic achievement of students at the D3 and S1 education levels at Siliwangi University class of 2018-2021. Academic flow, digital literacy and self-regulated learning have a significant effect on the academic achievement of students at the D3 and S1 education levels at Siliwangi University class of 2018-2021.

REFERENCES

Aini, N. Q., & Fahriza, I. (2020). Flow akademik pada pendidikan. *Jurnal Dinamika Pendidikan, 13*(3), 369–376. https://doi.org/10.33541/jdp.v12i3.1295

Asmendri, A., & Sari, M. (2018). Analisis Teori-Teori Belajar pada Pengembangan Model Blended Learning dengan facebook (MBL-FB). *Natural Science, 4*(2), 604–615. https://doi.org/10.15548/nsc.v4i2.449

Borovay, L. A., Shore, B. M., Caccese, C., Yang, E., & Hua, O. (2019). Flow, achievement level, and inquiry-based learning. *Journal of Advanced Academics*, *30*(1), 74–106. https://doi.org/10.1177/1932202X18809659

Csikszentmihalyi, M. (2014). *Applications of flow in human development and education*. Springer.

Dinata, K. B. (2021). Literasi digital dalam pembelajaran daring. *Eksponen*, *11*(1), 20–27. https://doi.org/10.47637/eksponen.v11i1.368

Effendi, F., Bustanur, B., & Mailani, I. (2019). Pengaruh Literasi Media Digital Terhadap Prestasi Belajar Mahasiswa (Prodi PAI UNIKS). *JOM FTK UNIKS (Jurnal Online Mahasiswa FTK UNIKS)*, *1*(1), 81–93. https://ejournal.uniks.ac.id/index.php/JOM/article/view/598

Jannah, E. R. (2020). Analisis Korelasi Self Efficacy dan Flow Akademik dengan Prestasi Belajar Pendidikan Agama Islam di Sekolah Menengah Kejuruan YPM (Yayasan Pendidikan Maarif) 5 Sukodono Sidoarjo. *Intelektual: Jurnal Pendidikan Dan Studi Keislaman*, *10*(1), 17–26. https://doi.org/10.33367/ji.v10i1.1088

Kristiyani, T. (2016). *Self-Regulated Learning Concepts, Implications, and Challenges for Students in Indonesia*. Yogyakarta: Sanata Dharma University Press.

Pamungkas, H. P. (2020). Self-Regulated Learning Bagi Mahasiswa: Pentingkah? *Jurnal Pendidikan Ekonomi*, *13*(1), 69–75. https://doi.org/10.17977/UM014v13i12020p069

Parnawi, A. (2020). *Penelitian tindakan kelas (classroom action research)*. Deepublish.

Saraswati, P. (2017). Strategi Self regulated learning dan prokrastinasi akademik terhadap prestasi akademik. *Intuisi: Jurnal Psikologi Ilmiah*, *9*(3), 210–223. http://journal.unnes.ac.id/nju/index.php/INTUISI

Shopova, T. (2014). Digital literacy of students and its improvement at the university. *Journal on Efficiency and Responsibility in Education and Science*, *7*(2), 26–32. https://doi.org/10.7160/eriesj.2014.070201

Supriyanto, S. (2017). Hubungan Antara Self-Regulated Learning dan Prestasi Akademik pada Mahasiswa Semester Pertama Prodi Psikologi Universitas Pembangunan Jaya. *WIDYAKALA JOURNAL: JOURNAL OF PEMBANGUNAN JAYA UNIVERSITY*, *2*(1), 49–61. https://doi.org/10.36262/widyakala.v2i1.10

Surindra, B., & Bakti, W. (2018). Penerapan Self Regulated Learning (SRL) Dalam Meningkatkan Hasil Belajar Mahasiswa Pada Pembelejaran Statistik Inferensial. *Prosiding Seminar Nasional Pendidikan Ekonom Dan Call for Paper*.

Zainudin, M. (2021). Pengaruh E-Learning Dan Kemandirian Belajar Ditinjau Dari Hasil Belajar. *Journal of Technology, Mathematics and Social Science*, *1*(1), 1–13.