
THE IMPACTS OF EDUCATION LEVEL ON FINANCIAL LITERACY AND FINANCIAL BEHAVIOURS: THE CASE OF WOMEN ENTREPRENEURS

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Abstract

Financial literacy is a person's ability to understand and manage personal finances effectively. High education and financial literacy will certainly influence financial behavior. Women entrepreneurs are a crucial group in the economy of a country, especially in Indonesia. The research objective was to examine the effect of education level on financial literacy and financial behavior of women entrepreneurs in Jambi. This research was quantitative research by using primary data in the form of a questionnaire given to female entrepreneurs in Jambi as respondents using the accidental sampling technique and Slovin's formula that obtained a total of 100 respondents. The data were analyzed using Smart PLS. The results obtained in this research, the education level had a significant positive effect on financial literacy and financial behavior. Furthermore, financial literacy could mediate between the education level and financial behavior of women entrepreneurs in Jambi.

Keywords: behavior, finance, financial instruments, literacy, personal finances

Introduction

Financial literacy is a person's ability to understand and manage personal finances effectively (Lusardi, 2019). According to Law Number 23 of 2014 concerning Governance and Governance of State Finances, financial literacy is a person's ability to understand and manage personal finances, as well as understand and manage financial risks. In addition, financial literacy is also part of economic literacy, which includes a person's ability to understand and manage economic risks, as well as understand and manage assets and liabilities.

Research has found that education level affects financial literacy (Tóth et al., 2015). Higher education levels tend to have higher levels of financial literacy (Susanti et al., 2017). However, education level is not the only factor that influences a person's financial literacy. Other factors that affect a person's financial literacy include experience, knowledge, income, and family education (Putra et al., 2016; Yusnita & Abdi, 2018). Women entrepreneurs are a crucial group in the economy of a country, especially in Indonesia. However, there are still many women entrepreneurs who experience difficulties in managing their business finances due to a lack of financial literacy.

Table 1. *The data of Jambi MSME (UMKM) 2022*

No	DISTRICT/CITY	ENTREPRISE			TOTAL NUMBER
		MICRO	SMALL	MEDIUM	
1	Merangin	4.877	693	13	5.583
2	Kota Jambi	44.307	3.506	-	47.813
3	Sarolangun	3.602	478	10	4.090
4	Kota Sungai Penuh	6.856	1.076	1.699	9.631
5	Kerinci	11.044	1.106	125	12.275
6	Batanghari	18.432	175	10	18.617
7	Bungo	2.327	881	290	3.498
8	Tanjung Jabung Barat	7.432	1.048	-	8.480
9	Tebo	1.268	-	-	1.268
10	Muaro Jambi	41.234	-	-	41.234
11	Tanjung Jabung Timur	17.658	1.135	-	18.793
Total Number		159.037	10.098	2.147	171.282
2021 (Year)		152.373	10.708	2.416	163.964
Improvement		4,2	-6,0	-12,5	4,3

Source: (The Cooperatives and Small and Medium Enterprises Office, 2022)

Based on Figure 1, the MSMEs (UMKM) in Jambi Province will fluctuate in 2022. In micro-enterprises, there will be an increase of 4.2%. Meanwhile, small enterprises will experience a decrease of 6%, and medium enterprises will experience a decrease of 12.5%. On average, the number of MSMEs in Jambi Province has increased by 4.3%. It means there will be an additional number of MSMEs from 2021 to 2022 of 4.3%. Jambi has the highest number of MSMEs compared to other districts and cities in Jambi Province.

This research aimed to analyze the relationship between the education level of financial literacy and behavior among women entrepreneurs. The specific aim of this research was to examine the effect of the financial literacy of women entrepreneurs based on educational level. This research is expected to provide beneficial information for the government and financial institutions to increase the financial literacy of women entrepreneurs.

Literature Review

The education level

Higher education is paramount to support financial literacy or the ability to understand and manage finances well because, with higher education, a person will have the concept of investing in financial instruments needed to make the right financial decisions. Education has a great effect on financial literacy, as has been shown by several studies. Zhou et al. (2022) found financial education in the form of regulations made by the government in China to help shape attitudes, knowledge, and behavior. Additionally, Aziz (2021) found a relationship between learning in college and the financial literacy level, especially in cognitive and attitudinal aspects. Education is measured through formal education obtained by business doers, including the final education attained. Peng et al. (2007) stated

that education level is a long-term process that uses systematic and organized methods in which the managerial workforce learns conceptual and theoretical knowledge for general purposes.

Financial literacy

A person's ability to manage finances is a skill and ability to use resources to achieve definite goals. One's financial knowledge is an integral dimension of financial literacy (Peng et al., 2007). According to Lusardi (2019), several indicators that affect financial literacy are budgeting, savings, loans, and investments. Financial literacy involves the ability to manage income, finance, invest, use loans or credit, and manage savings. Several indicators to measure a person's financial literacy level, including:

- Ability to manage personal finances. Someone whose high financial literacy tends to be able to manage personal finances well by making a monthly budget, paying bills on time, and not taking too many loans.
- The ability to understand financial products means being able to understand the workings and benefits of various financial products, such as deposits, insurance, or mutual funds
- The ability to make the right financial decisions is someone with high financial literacy can make the right financial decisions on their financial goals and financial situation.
- The ability to understand and manage financial risk is for someone who understands financial risks that may occur and manage them properly, for example, by having proper insurance or managing investments by taking into account the risks that may occur.
- Ability to manage finances in the long term: People with high financial literacy can make long-term financial plans based on their future financial goals, such as preparing for retirement funds or buying property.

Methodology

Research design and approach of the study

This research used quantitative data (Sekaran & Bougie, 2016), including scores on respondents' answers through collected questionnaires. The primary data were from questionnaires given to respondents.

Research site, access, and sample

The population in this research was all women entrepreneurs (MSMEs) in Jambi. Furthermore, the sampling technique used non-probability sampling with an accidental sampling approach where sampling was because the respondent happened to appear. The number of samples in this research used the Slovin formula as follows:

$$n = \frac{N}{1 + Na^2}$$

n: number of samples

N: number of population

a: Error rate used

$$n = \frac{37.294}{1 + 37.294 (0,1)^2}$$

$$= 99,73$$

Therefore, the number of samples in this research was 99.73 which was rounded up to 100 respondents.

Variable dimensions and measurements

Table 2. *Operational definition and variable measurement*

Variable	Indicator	Measurement Scale
Education Level (Lusardi, 2019; Zhou et al., 2022)	Educational Stage	Primary School (SD) = 1 Junior High School (SMP) = 2 Senior High School (SMA) = 3 S-1 = 4 S-2 = 5
	Important Non-Formal Education	Likert Scale 1-5
Financial Literacy (Lusardi, 2019)	Have strong knowledge in setting up enterprise	Likert Scale 1-5
	Have skills in running a business.	
	High learning motivation	
	1. Income	Likert Scale 1-5
	2. Expenses	
Financial Behaviour (Xiao et al., 2008)	3. Literacy on Credit	
	4. Literacy about Savings	
	5. Literacy about Investment	
	1. The tendency to consider income and expenses.	Likert Scale 1-5
	2. Financial decision-makers are neurologically inclined to influence (emotionally).	
	3. Pay attention to the principles of perfect self-interest, perfect rationality, and perfect information	

Data analysis

The data in the research were analyzed descriptively and then tested for validity, reliability, and hypothesis testing with Smart PLS. According to Hair et al. (2017), three calculations in Smart PLS are PLS Algorithm, Bootstrapping, and Blindfolding. PLS Algorithm or standard algorithm to calculate the components (factors) that comprise a calculation

- The path coefficient between each exogenous variable to the endogenous variable
- Outer loading is used to measure whether the indicator can represent the variable
- Direct effect, indirect effect, and total effect
- R Square and R Square Adjusted to find out what percentage of exogenous variables can influence endogenous variables
- F square to calculate the magnitude of the effect between variables with the effect size
- Construct reliability and validity for reliability and validity tests, including Cronbach's Alpha, Composite Reliability, and Convergent validity
- Discriminant validity, showing the Fornell Larcker criterion table
- Collinearity Statistics is used for multicollinearity tests using VIF (Variance Inflation Factor) values.

Bootstrapping is a process for assessing the significance or probability level of direct effects, indirect effects, and total effects. In addition, bootstrapping can also assess the significance level of other values, including r square and adjusted r square, f square, outer loading, and outer weight.

Findings

Based on the questionnaire results, some information can be presented as support for research results. This research aims to see the effect of education level on the financial literacy of women entrepreneurs in Jambi.

Table 3. *Data description*

Indicator		Total Number	Percentage (%)
Education	Primary School	7	7
	Junior High School	13	13
	Senior High School	27	27
	S1	44	44
	S2	9	9
	Total	100	100
Long of Enterprise	1 - 5 year	42	46
	6 - 10 year	33	29
	11 - 25 year	18	18
	26 - 40 year	7	7
	Total	100	100

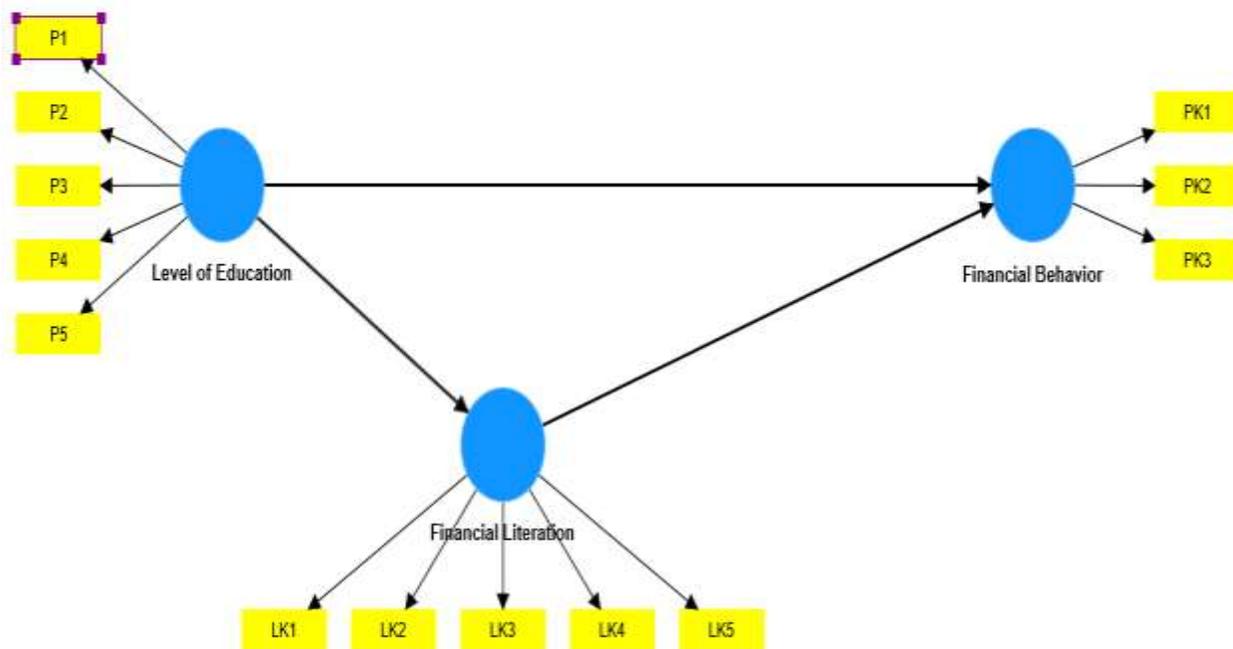
Source: Questionnaire Results

Based on the education level, the results of the questionnaire, women entrepreneur respondents in Jamb had a variety of education, starting with 7 elementary school graduates, or 7%, 13 junior high school graduates, or 13%, 27 senior high school graduates or 27%, bachelor’s degrees. 44 bachelor’s degree (S1) graduates or 44%, 9 master’s degree graduates or 9%. The conclusion is the average education of women entrepreneurs in Jambi is a bachelor's degree.

Based on the length of enterprise, the results of the respondent's questionnaire showed that it was 1-5 years, with the highest number was 42 respondents or the equivalent of 42%, 6-10 years with total respondents of 34 or the equivalent of 34%, 11-25 years with 18 respondents or the equivalent of 18% and 26-40 years with total respondents of 7 or equivalent to 7%. The conclusion is that most respondents have a business time of 1-5 years, with total respondents of 42 respondents.

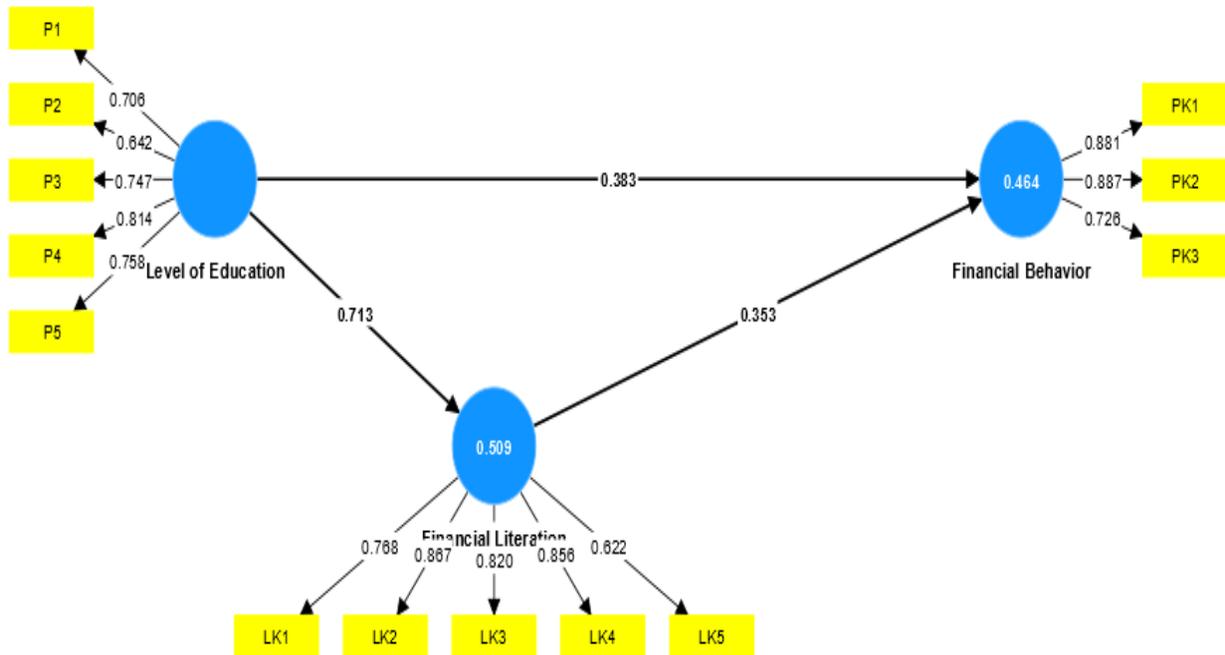
The dependent variable in this research is financial behavior, while the independent variable is the education level of women entrepreneurs in Jambi. In addition, this research looks at the relationship between education level and financial literacy which mediates the relationship between education and financial behavior, and the relationship of financial literacy owned by women entrepreneurs in Jambi to financial behavior. The research model is in Figure 2 as follows:

Figure 1. *Research model*



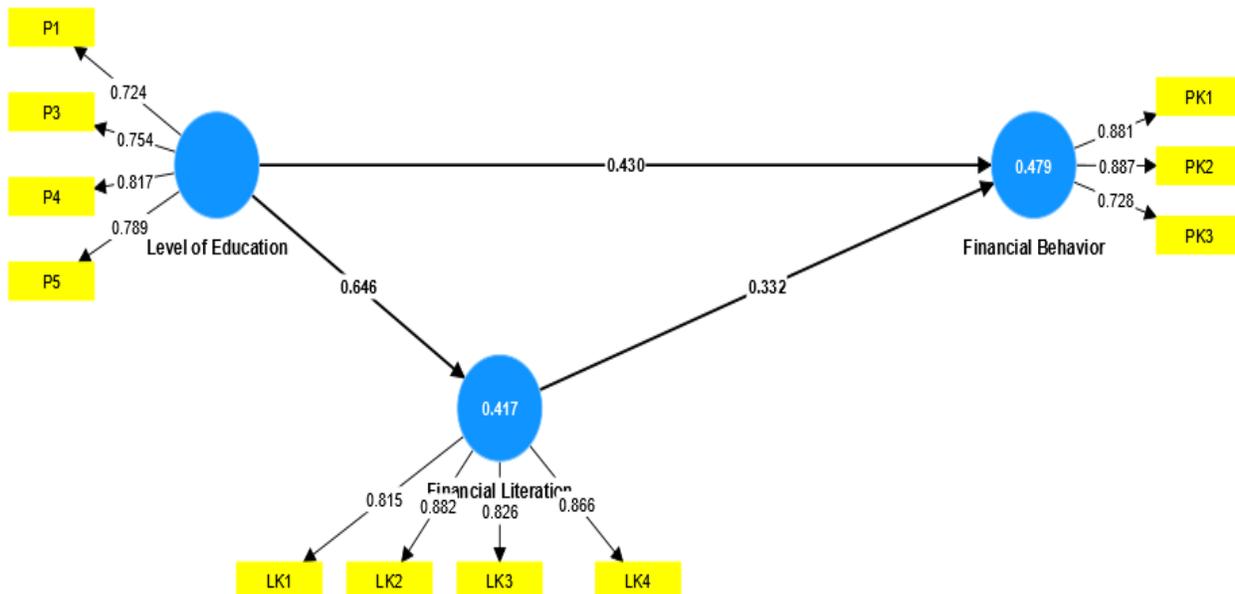
The validity and reliability test of research indicators using loading factor, Cronbach's alpha, Composite reliability (rho_a), Composite reliability (rho_c), and Average variance extracted (AVE) with the following results:

Figure 2. First test of factor loading



Based on the first test of the factor loading, there are still 2 indicators below 0.7, so the researchers eliminated these 2 indicators. Below are the results obtained.

Figure 3. Test of factor loading after eliminating indicator



Based on the second test of factor loading after eliminating indicators P2 and LK5, the results show that all indicators have a value above 0.7 which can be seen in detail in the following table:

Table 4. *Outer loading test results*

	Financial Literacy	Education Level	Financial Behavior
LK1	0.815		
LK2	0.882		
LK3	0.826		
LK4	0.866		
P1		0.724	
P3		0.754	
P4		0.817	
P5		0.789	
PK1			0.881
PK2			0.887
PK3			0.728

Table 4 shows the outer loading values obtained from the results of all indicators having a value above 0.7, so the indicators in the model can represent the variables in the research.

The validity and reliability test

Table 5. *Validity and reliability test*

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Financial Behavior	0.781	0.810	0.873	0.697
Financial Literacy	0.869	0.872	0.911	0.719
Education Level	0.773	0.772	0.855	0.596

Source: Output Smart PLS 4

Cronbach's alpha measures the lower limit of the reliability value of a construct, while composite reliability measures the actual reliable value of a construct. Composite reliability is considered better in estimating the internal consistency of a construct. The rule of thumb used for the Composite Reliability value and Cronbach's alpha value is higher than 0.7 (Ghozali, 2017), so the value of Cronbach's Alpha and Composite reliability has been fulfilled because it has a value above 0.7 so that the data in this research are reliable. The Average Variance Extracted value is used to test the validity of an indicator convergently, which means a set of indicators represents one latent variable and the underlying latent variable. Ideally, the AVE value is above 0.5. The results show the indicators in this model are valid.

Hypothesis test: Direct effect

Table 6. *Direct effect*

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Financial Literacy → Financial Behavior	0.332	0.323	0.103	3.215	0.001
Education Level → Financial Behavior	0.644	0.648	0.071	9.066	0.000
Education Level → Financial Literacy	0.646	0.650	0.074	8.744	0.000

Source: Output Smart PLS

Based on the results of the direct effect test, the results are:

- Financial literacy has a significant positive effect on the financial behavior of women entrepreneurs seen from the p-value below 0.05, which is 0.001, and with a path coefficient value of 0.332.
- Education level has a significant positive effect on the financial behavior of women entrepreneurs seen from the p-value below 0.05, which is 0.000 and with a path coefficient value of 0.644.
- Education level has a significant positive effect on the financial literacy of women entrepreneurs seen from the p-value below 0.05, which is 0.000 and with a path coefficient value of 0.646

Indirect effect

Table 7. *Indirect Effect*

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Education Level → Financial Literacy → Financial Behavior	0.214	0.209	0.068	3.171	0.002

Source: Output Smart PLS

Table 7 is the result of the indirect effect of education level on the financial behavior of women entrepreneurs in Jambi mediated by financial literacy. The significant results are a p-value of 0.002, which is below the value of 0.05, so it shows that financial literacy can mediate the relationship between education level and financial behavior.

Discussion

Education level and financial literacy

Based on the hypothesis testing, the results show that the education level has a positive effect on financial literacy for women entrepreneurs in Jambi. It means that the higher the education of women entrepreneurs in Jambi, the higher the financial literacy of women entrepreneurs in Jambi. Proper financial education can help to make better financial decisions by managing expenses more efficiently and avoiding financial problems such as high debt. High financial literacy can help someone understand how the financial system works, make more informed financial decisions, and achieve benefits in the future.

The importance of effective financial education programs with a practical and solution-focused approach, considering the needs and financial literacy level of everyone. Financial education in schools can help students understand basic financial concepts and develop good financial habits from an early age. Proper financial education can help prevent financial problems in the future. Research shows that higher education levels will have higher financial literacy because they have sufficiently high insight and willingness to learn and additional material that opens their eyes to the importance of financial literacy.

The results of this research are in line with the findings obtained by [Artina and Cholid \(2018\)](#); [Sconti \(2022\)](#); [Susanti et al. \(2017\)](#); [Widayati \(2014\)](#); [Yusnita and Abdi \(2018\)](#); [Zhou et al. \(2022\)](#) that the education level had a positive effect on financial literacy. The higher the education, the better the financial literacy of the individual.

Education level and financial behavior

Based on the hypothesis testing, the results show that the education level has a positive effect on the financial behavior of women entrepreneurs in Jambi. It means that the higher the education of women entrepreneurs in Jambi, the better the financial behavior of women entrepreneurs in Jambi. The relationship between education level and financial behavior is because higher education levels tend to have higher financial literacy and have good financial habits and can manage finances better by making more informed financial decisions and achieving profits in the future.

The education level can also affect a person's attitude toward money and finance. People with higher levels of education tend to understand more about the importance of managing their finances well and can better manage their spending wisely. They also tend to be better able to manage financial risks and understand how the financial system works. The results of this research are in the line with the findings of [Baihaqqy and Sari \(2020\)](#); [Peng et al. \(2007\)](#); [Tóth et al. \(2015\)](#), who found educational level correlated with financial literacy.

Financial literacy and financial behavior

Based on the hypothesis testing, the results show that financial literacy has a positive effect on the financial behavior of women entrepreneurs in Jambi. It means that the better the financial

literacy of women entrepreneurs in Jambi, the better the financial behavior of women entrepreneurs in Jambi.

Financial literacy is the ability to understand basic financial concepts, manage personal finances well, and make the right financial decisions. Financial literacy has a strong relationship with financial behavior. High financial literacy tends to have better financial habits, such as managing expenses wisely, having a clear financial plan, and managing financial risks. Good financial behavior will have more stable finances, achieve financial benefits in the future, and be able to deal with financial problems that may be encountered, such as high debt or changes in financial situations. Therefore, the importance of financial literacy is to manage finances wisely. The results of this research are in line with findings conducted by Anggraeni (2016), Brown and Graf (2013); and Sun et al. (2022), which found there is a relationship between the level of individual financial literacy and financial behavior. The better the financial literacy of individuals, the better their financial behavior will be.

Conclusion

Based on the results of the research, the conclusions are:

- Education level has a significant positive effect on the financial literacy of women entrepreneurs in Jambi.
- Education level has a significant positive effect on the financial behavior of women entrepreneurs in Jambi.
- Financial literacy has a significant positive effect on the financial behavior of women entrepreneurs in Jambi.
- Financial literacy can mediate the relationship between educational level and financial behavior.

The suggestion in this research is for the government, especially in the field of education, to create a program or add to the curriculum related to financial literacy material. Besides improving behavior and providing lessons in schools and campuses, education is also expected to be a bridge for students to learn the importance of managing finances, so they become successful generations in the future.

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