International Journal of Science and Research (IJSR)
ISSN: 2319-7064
SJIF (2022): 7.942

Internal Factors Affecting Students' Preferences on Vocational Education in the Arts: A Survey in Indonesia

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Abstract: ***This study aims to examine the effect of students' internal factor (information literacy, self-knowledge, and attitude) on their decision to enroll inthe art education program of vocational high school (VHS). It is ex-post facto correlational research using a sample of 300 out of a total of 1, 086 students. The sample was established using the proportional random sampling techniqueby means of the Krejcie and Morgan formula. The data were collected by means ofquestionnaires, observation sheets, and documents. The results of the study show that (1) there is a significant and positive relationship between internal factors and students' decisions to take art education at Vocational High Schools; (2) all internal factors have a significant effect both directly and indirectly on students' decisions to take art education in Vocational High Schools.***

Keywords: information literacy, self-knowledge, vocational program in VHS

1. Introduction

Based on Indonesia's Act Number 20 Year 2003 on National Education System in Indonesia, once students graduate from junior high school (JHS), they are offered two alternatives to continue to secondary education, i.e. general secondary education in the form of senior high school (SHS) and vocational secondary education in the form of vocational high school (VHS). While SHS prepares students for higher education, VHS teaches students to be ready for employment and professional development (Minister of National Education Regulation Number 22 Year 2006 on Standard of Contents).

In regards to the latter alternative, there is a demand for all stakeholders to pay a special attention to JHS graduates who intend to continue their education to VHS, particularly in selecting the vocational program of their choice in order to avoid further problems related to taking the wrong program.

This is especially important due to the extensive fields of vocational programs offered in VHS. Based on the vocational program spectrum of the secondary vocational education in Indonesia, there are currently nine vocational fields, 46 vocational programs, and 142 vocational competencies (Decree of the Director General of Elementary and Secondary Education, Ministry of Education and Culture, Republic of Indonesia Number: 4678/D/Kep/2016 on 2 September 2016, on Vocational Spectrum of Secondary Vocational Education. When students are selecting schools for their secondary education, both parents and teachers, as well as the students themselves, must pay serious attention in order to prevent uncertainty among students in terms of their choice of secondary education. This uncertainty may be caused by: 1) students' inability to make a decision among the available alternatives, 2) students' lack of interest, and 3) students' lack of confidence (Walsh, & Savickas, 2005; Ali & Asrori, 2019).

Choosing the wrong secondary education may cause the learning activities and school experience to be unenjoyable, punishing, tense, and full of pressure for students when the school does not fit their interest. Goh, & Zukas (2016) and Hurlock (1980) points out that the students' lack of interest in the type of education affects their academic performance and behavior to the point that they would skip classes and even quit school.

Making choices is essentially a combination of needs, hopes, personal resources, and ecomomic necessities (Yi-Lee Wong & Paula Kwan, 2019). Furthermore, London (1973: 74) and Robert (2018)writes that vocational choice is a combination of interests, abilities, values, opportunities, hopes, and realities. Therefore, JHS should provide the students with sufficient information regarding vocational fields, vocational programs, and vocational competencies offered by VHS. Detailed information on VHS such as its vision, missions, goals, and vocational programs available helps parents and students choose the right program they desire (Nasrullah, at. al., 2017; Lydia, et. al, 2019).

Robert (2018) and Haron at. al., (2019)assert that making choices is a complex issue in one's vocational development stages. Furthermore, the process of making vocational choices is influenced by the types of personalities. One's personality development is essentially a mental process which is the result of one's involvement in one's community, both in similarities and differences. Tiedeman uses the term "ego identity" to describe one's personality in relation to one's community. Self-identity is constructed through the interaction of three factors: biological, psychological, and socio-cultural conditions in which a person lives. Therefore, one's vocational choice always considers the clash between life pattern and vocational development structure.

According to Maranto & Shakeel (2020), there are four interrelated components that affect the decision-making process when selecting a job or vocational program: reality factors, educational process, emotional factors, and personal values. Reality variables are connected to how one reacts to their surroundings, which compels them to choose a vocation. The quantity and quality of education one receives, along with the educational process, are what allow one to develop the knowledge necessary to make a career decision. There are links between emotional characteristics and

personality features. Personal values are aspects of someone's values that influence their choice of profession. Career decisions are psychologically based on a person's understanding of the objective world and how it relates to them (Horne, 2018). Moreover, one's vocational development is essentially an interaction between individual behaviors, attitudes, ambitions, as well as values and social factors in one are surrounding (London, 1973; Perry & Wallace, 2015). Thus, vocational choices are one's psychological process to find the right attitude toward a particular object.

One's personality or character affects how they respond to the many occupational and employment options available in their community (Holland, 1973: 88). It implies that one will select a vocation in accordance with their personality. According to the aforementioned Holland theory, individuals will reflect inside (self-knowledge) in order to determine whether or not a specific vocation is a good fit for their personality. Self-awareness is thus one of the most significant elements that affects career decisions. Tetsuya Kawamoto, (2019), and West Henderson, et al. (2018) assert that people will choose specific careers if they are confident and hopeful that those careers will lead to success. As a result, people will work harder to pursue their ideal careers.

In choosing a vocational program in VHS, JHS graduates encounter some problems, for example (1) they do not fully understand the details of each program offered in VHS, (2) they lack sufficient understanding of the world of work associated with those programs, (3) they do not know the requirements they have to fulfill for each program, both the cognitive and physical ones, (4) most JHS students have insufficient access to information technology so they have problems in keeping up with the development of technology and employment related to those vocational programs, and (5) their self-knowledge is not good enough to be able to choose the right program for them.

Given the wide spectrum of vocational programs available in VHS, this research focuses on JHS students' preference for art education program in VHS. The determinant factors in this preference are limited to the students' internal factors, namely information literacy, self-knowledge, and attitudes toward the art education program.

Purpose of the Study

This study looks at two things: (1) the description of psychological factors (self-knowledge, information literacy, andattitude) regarding JHS students' decisions to enroll in the mechanical engineering program at VHS in Indonesia, particularly in the Yogyakarta Special Region, and (2) the effects of these internal factors on their preference for the art education program at VHS.

2. Method

Research Design

This correlational study sought to identify the variables that may affect JHS graduates in the Yogyakarta Special Region's decision to enroll in the VHS art education program.

Research Participants and Sampling Procedure

The research population consisted of 1, 086 JHS graduates who recently enrolled at VHS majoring in the art education in Yogyakarta Special Region, Indonesia. By means of Krejcie and Morgan's sampling formula (Issac & Michael, 1981), i.e.5% margin of error is acceptable; a sample of 285 students was established using the proportional random sampling technique. To anticipate any questionnaires and data that could not be processed, the number of sample was added by 5%. Thus, the minimum sample used in this study was as many as: 285 + (5% x 285) = 300 students.

Research Instruments

Surveys employing questionnaires, observation logs, and papers were used to gather the data. To determine if the instrument items were appropriate for measuring the components involved in the defined constructs, the validity of the instruments was evaluated by expert judgment using the Delphi technique (content validity) and confirmatory factor analysis (construct validity) (Ary, Jacobs Razavieh, 1982; Schwartz et. al., 2010). In the meantime, Cronbach's alpha was used to calculate the instrument dependability (Fernandes, 1984: 61). Information literacy, self-knowledge, attitudes, and the choice to participate in the art education program scored 0.88, 0.79, 0.91, and 0.93 accordingly on the instrument reliability test. The recommended research tools could therefore be utilized to gather data.

Table 1 displays the research instrument's grilles.

Table 1: The grilles of the research instrument

Variable	Indicator	Sub Indicator
Mastery of Information	1) Insights about information technology	1. Media Information
		2. Understanding
		3. Application
		4. Adaptation
	2) Insights into VHS (Art education expertise)	1. The existence of VHS
		2. Vocational Education System (input, process, out-put, out-come)
	3) Insight into the world of work in the field of machinery	1. Type of work
		3. Job requirements
		4. Rewards / impact
Self-understanding	1) Understand ability (achievement)	1. Be objective about your cognitive abilities
		2. Be objective about their psychomotor abilities
		3. Be objective about the affective abilities they have
	2) Understanding the physical state	1. Be objective about the weaknesses / strengths of the physical state (body posture, face, body integrity)
		2. Be objective about the state of health of the body

	3) Philosophy of life	1. Stick to the norm
		2. Not arrogant / frustrated
		3. Experience yourself as a creature of God
Attitudes towards secondary schools (VHS)	1) The existence of VHs	1. Vocational vision, mission and objectives
		2. Vocational Image
	2) Education System in Vocational Schools	1. Input
		2. Process
		3. Out-put/out-come
	3) Prospects of VHS graduates in art education	1. The waiting period of work
		2. Types of employment
		3. Income

Data Analysis

The research data were analyzed using descriptive analysis and inferential analysis (hypothesis testing) which included correlation analysis, regression analysis, and path analysis. Before testing the hypothesis, statistical assumptions were first tested which included tests for normality, linearity, homoscedasticity, and multicollinearity of the research data. The correlation between the variables of this study is presented in Figure 1 below.

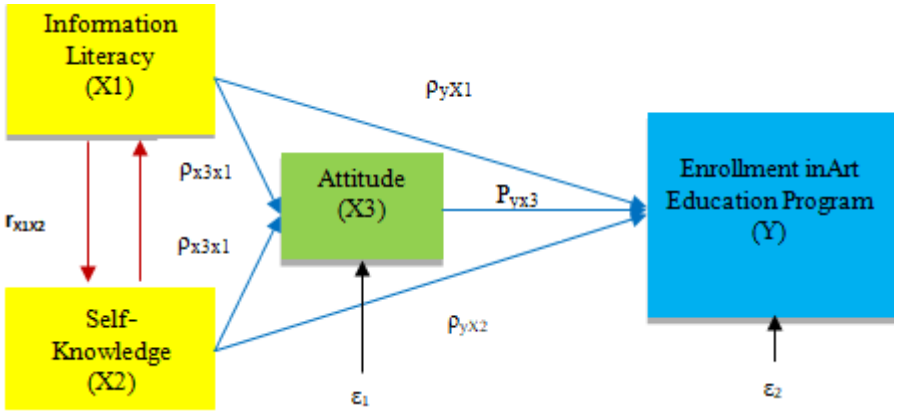

Figure 1: Inter-Variable Correlation

3. Results and Discussion

The data in this study are summarized inthe presentations of frequency distribution, central tendencies (mean, mode, median), as well as measures of dispersion (standard deviation), and the descriptive interpretation of four variables, namely information literacy (X1), self-knowledge (X2), attitude (X3), and decision to enroll in the art education program at VHS (Y). The analysis result is presented in Table 2.

Table 2: Descriptive Analysis Result

Var.	SD.	Mi	M	Me	Mo	M: Mi	Value (%)	Category
X1	9.67	78	95.66	95.00	96.00	Higher	73.5	High
X2	5.41	33	44.03	44.00	44.00	Higher	80.3	High
X3	7.16	54	75.29	75.00	72.00	Higher	83.6	High
Y	6.92	51	69.22	69.00	70.00	Higher	81.0	High

The descriptive analysis result reveals that the empirical mean value (M) is higher than the criteria mean value (Mi). Table 1 also shows that the gained value for all variables is above 70%. Thus, it can be generally said that all variables in this study are classified in the "high" category.

Inter-Variable Correlation

The correlation or relationship among variables can be estimated by testing the hypothesis: There is a significant relationship among all variables, namely information literacy (X1), self-knowledge (X2), attitude (X3), and preference for the art education program at VHS (Y). To test the hypothesis, null correlation analysis with Pearson's Product Moment was carried out. The test results, as seen in Table 3, confirm that the hypothesis is accepted at the significance level of 0.05.

Table 3: The Inter-Variables'Null Correlation Analysis

		X1	X2	X3	Y
X1	Pearson Correlation	1	.582	.448	.545
	Sig.	.000	.000	.000	.000
X2	Pearson Correlation	.582	1	.535	.515
	Sig.	.000	.000	.000	.000
X3	Pearson Correlation	.448	.535	1	.651
	Sig.	.000	.000	.000	.000
Y	Pearson Correlation	.545	.515	.651	1
	Sig.	.000	.000	.000	.000

The effect of information literacy (X1) and self-knowledge (X2) on students' attitude toward VHS (X3)

The effect of information literacy and self-knowledge on students' attitude toward VHS can be determined by testing the hypothesis: There is a significant effect of information literacy (X1) and self-knowledge (X2) on students' attitude

toward VHS (X3). The multiple regression analysis was used to test the hypothesis, where X3 was the dependent variable, while X1 and X2 were the independent variables. The analysis result is presented in Table 4 below.

Table 4: The Multiple Regression Analysis Result of X3 on X1 and X2

Variable		B	Beta	$r_{partial}$	Det. Partial (r^2_{par})	T_{table}	Sig. t
Dependent	Independent						
X3	X1	0.225	0.305	0.267	0.071	4.743	0.000
R = 0.695 R^2= 0.483 F = 55.000 P < 0.05 C = 25.13	X2	0.572	0.433	0.423	0.179	4.994	0.000

The result of the multiple regression analysis (Table 3) shows that F count = 55.00 and p <0.05; thus, the correlation coefficient (R) of 0.695 is significant at the significance level of 0.05. This affirms that the hypothesis "There is a significant effect of information literacy (X1) and self-knowledge (X2) on students' attitude toward VHS (X3)" is accepted. The coefficient of determination (R^2) of 0.483 shows that the contribution of the two variables is 48.3%.

The effect of information literacy (X1), self-knowledge (X2), and students' attitude toward VHS (X3) on their preference for mechanical engineering program at VHS (Y)

The tested hypothesis is "There is a significant effect of information literacy (X1), self-knowledge (X2), and students' attitude toward VHS (X3) on their preference for the art education program at VHS (Y)". Multiple regression analysis was used to test the hypothesis, where Y was the dependent variable, while X1, X2, and X3 were the independent variables. The summary of multiple regression analysis result is presented in Table 5.

Table 5: The Multiple Regression Analysis Result of Y on X1, X2, and X3

Variable		B	Beta	r_{par}	Det. Partial (r^2_{par})	T_{count}	Sig. t
Dependent	Independent						
Y	X1	0.019	0.057	0.075	0.006	0.722	0.026
R = 0.733	X2	0.284	0.222	0.223	0.050	3.992	0.000
R^2= 0.538 F = 56.816 P < 0.05 C = 12.199	X3	0.366	0.378	0.371	0.138	6.844	0.000

The results of the multiple regression analysis as shown inTable 4 show that F_{count}= 56.815 and p < 0.05, indicating that the correlation value (R) of 0.538 is significant at the significance level of 0.05. Based on the above results, the hypothesis that students' information literacy (X1), self-knowledge (X2), and attitudes towardVHS (X3) significantly affect their choice of the art education program in VHS (Y) is accepted. Furthermore, the coefficient of determination value (R^2) of 0.538 shows that 53.8% of the variation in Y is contributed by X1, X2, and X3.

In details, information literacy (X1) has a significant effect on the students' preference for the art education program in VHS with β= 0.057 and p> 0.05, so doesself-knowledge (X2) with β= 0.222 and p< 0.05and attitudes towardsVHS (X3) with β = 0.378 and p < 0.05. Based on the coefficient of partial determination, students' attitude toward VHSis the most influential factor affecting their choice of mechanical engineering program in VHS (13.8%), followed by self-knowledge (5%), and information literacy (0.6%). Therefore, attitude has a more dominant role in deciding to enroll in the art education program in VHS.

Based on the predictor value and the constant of multiple regression results, the multiple regression equation is $Y = 12.199 + 0.019\ X_1 + 0.284X_2 + 0.366X_3$. This equation indicates that the average value of Y (the students' decision to enroll in the art education program in VHS) will increase or decrease by 0.019, 0.284, and 0.366 for each increase or decrease in information literacy (X1), self-knowledge (X2), and attitude toward VHS (X3) respectively by one unit.

An empirical causal relationship model containing the regression coefficient (β) or path coefficientis presented in Figure 2.

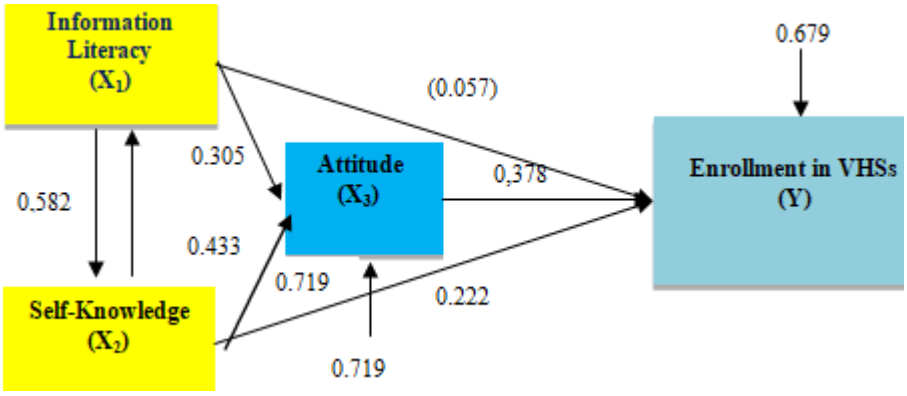

Figure 2: An Empirical Causal Relationship Model

Path Analysis (Direct and Indirect Effects)

The direct and indirect effects are examined by testing the significance of path coefficient based on the empirical causal relationship model. A coefficient of less than 0.05 is not significant and is excluded from the model. The direct effect can be determined from the beta coefficients of two regression analyses using the stepwise methods, namely: (1) a multiple regression of X_3 on X_1 and X_2, and (2) a multiple regression of Y on X_1, X_2, and X_3. However, the indirect effects are calculated manually based on the direct path coefficient in the causal relationship model.

The summary of the direct, indirect, and non-causal relationships of the above causal relationship model is presented in Table 6 below.

Table 6: Path Analysis Results

z		Direct Effect	Indirect Effect on X_3	Total Effect	Non-Causal Effect	Correlation
Dependent	Independent					
X3	X_1	0.305	-	0.305	0.124	0.448
	X_2	0.433	-	0.433	0.206	0.535
Y	X_1	0.057	0.040	0.040	0.234	0.545
	X_2	0.225	0.162	0.162	0.210	0.515
	X_3	0.378	-	0.378	0.409	0.651

Based on the results of the direct and indirecteffect analysis, the data show the followings:

a) The direct effect of the students' information literacy on their preference for the art education program in VHS is significant, and so is the indirect effectof the students' attitudes.
b) The direct effect of the students' self-knowledge on their preference for art education program in VHS is significant, and likewise the indirect effect of the students' attitudes.

Based on the results of the route analysis discussed above, it can be said that the students' information literacy, self-knowledge, and attitude toward VHS all have a significant impact on their decision to major in the art education program.

4. Discussion

This study successfully establishes that the association between the variables under investigation is "moderately strong. " The association between information literacy and pupils' attitudes has the lowest correlation (r=0.448). The association between students' attitudes and their desire for the art education program has the highest correlation (r=0.651), indicating that students' attitudes have a significant impact on whether or not they enroll in the VHS art education program. This is in line with the research results of Kun Yu and Xiao-min Xu (2019). confirming that attitudes, motivation, and the decision to enroll in vocational programs all have a favorable association. In order to enhance VHS's positive reputation, it is necessary to cultivate positive attitudes toward the learning process, output, and outcomes of VHS.

The result of the multiple regression analysis shows that information literacy, self-knowledge, and the students' attitude positively and significantly affect their preference for art education program in VHS. Furthermore, each aspect has a significant impact on the students' choice to major in art education. The significant effects of information literacy on the program the students prefer show that the findings of this research are correspondingly similar with that of Draaisma & Kuijpers (2017) and Seider (2012), confirming that information literacy on sciences and technologies affects one's orientation regarding their preferred vocational program. Furthermore, the results of this study are in accordance with the previous study carried out by Perry & Pickett, (2015) who found that information literacy on employment contributes 74.4% to the third grade students' interest to enroll in VHS. Similarly, Gard, et. al. (2018); Bello & Danjuma (2017) suggested that information literacy, self-knowledge, and attitude are the factors influencing and determining one's decision on what vocational program to choose. JHS graduates' lack of insight into the world of work affects their choice of secondary school (Hurlock, 1980: Godhe & Selwyn, 2019).

Accordingly, Herminarto (2015) and Agustiningsih, & Rahdiyanta (2019)confirmed that JHS graduates' lack of perception and poor attitudes toward VHS result from their

self-knowledge inadequacy which eventually will influence their accuracy in deciding what vocational program to enroll.

The path analysis's findings demonstrate the importance of both the direct and indirect effects of information literacy on preferences for art education programs in VHS. This finding suggests that the students' attitudes contribute to the explanation of how information literacy affects the occupational program they select. Additionally, it is consistent with the results of Hurlock's study from 2008, which indicated that the JHS students' information literacy on VHS would influence their view and attitude toward VHS, which ultimately would significantly influence their vocational decision. As a result, information literacy is one of the key elements impacting the decision-making process. To put it another way, JHS graduates who are information literate will make more informed and precise decisions when selecting the vocational program that is best for them. At the same time, several contextual elements from school, family, and society have an impact on information literacy. Students' information literacy will be strong if the situational aspect is favorable. This will eventually help to shape a better understanding of VHS, the advancement of science and technology, and the world of work connected to art education programs.

Besides, the result of the path analysis shows that the direct effect of the students' self-knowledge on their preference for art education program in VHS is significant, and likewise the indirect effect of the students' attitudes. This implies that students' attitude is crucial in explaining the effect of self-knowledge on the students' vocational decision making.

This is in line with the claim that a child's self-concept plays a major influence in the formation of their personality and conduct (Lee et al., 2020; Godhe & Selwyn, 2019). As a result, it implies that self-awareness is a crucial psychological process that influences how we act. The decision of what vocational program or career to pursue is better oriented for those who are aware of their potential. Given that each vocational program or career has unique qualities and requirements as well as both intrinsic and extrinsic effects, it makes perfect sense.

In addition, the results of the path analysis reveal that students' attitude toward VHS significantly and strongly affects their preferred vocational program. This is in line with the previous study by Bello & Danjuma (2017) and Muhajidin (2020), who claimed that attitude, is one of the psychological aspects of individuals which is crucial, because it is a person's tendency to behave so that it will affect a lot of one's behaviors. Attitude is a tendency to react to people, institutions, or events either positively or negatively. Furthermore, according to the theory of determinism, human attitudes are derived or influenced by genetic determinism, psychic determinism, and environmental determinism. Genetic determinism holds that the attitude of an individual is affected by that of his/her grandparents. Psychic determinism claims that one's behavior is affected by his/her parents' treatment, parenting, or education. Environmental determinism assumes that the development of a person's attitude is strongly affected by the environment in which the individual lives and how the environment treats him/her. Similarly, according to Thomson (1973) and Glenn (2017, the vocational program a person chooses is affected by either internal or psychological aspects.

The findings of this study show that all parties including the students themselves, parents, and teachers must pay serious attention when it comes to making decision on the right type of secondary school. It is particularly important in order to avoid any uncertainty about their targeted secondary school program. These uncertainties may be attributed to: 1) inability to choose one of the alternatives, 2) lack of interest and talent, and 3) hesitation due to the lack of self-confidence (Sirk & Loogma, 2016; Bello & Danjuma, 2017). Failure in choosing secondary school that fits one's ability and interest may have detrimental impacts. For example, this wrong choice may bring about unpleasant, torturing, and stressful condition in the teaching and learning process.

5. Conclusions

1) There is a positive and significant relationship between information literacy, self-knowledge, as well as attitude and the JHS students' preference for mechanical engineering program in VHS. The relationship among these variables is categorized as "strong". The lowest correlation coefficient is in the relationship between family environment and attitude (r = 0.448). Meanwhile, the highest correlation coefficient is in the relationship between attitude and enrollment in the art education program in VHS (r = 0.651).
2) Information literacy, self-knowledge, and attitude have a positive and significant impact on the students' decision to enroll in the mechanical engineering program in VHS (53.8%). Based on the coefficient of partial determination, the students' attitude is the most influential variable affecting their choice of the art education program in VHS (13.8%), followed by self-knowledge (5%), and information literacy (4.6%).
3) JHS students' internal factors of information literacy, self-knowledge, and attitude have a positive and significant effect either directly or indirectly on their decision to enroll in the art education program in VHS.

6. Suggestions

Information literacy, self-awareness, and attitude are significant factors in JHS graduates' decision to major in art education at VHS. JHS students should therefore always be motivated to build their own skills, especially those that are connected to the growth of their information literacy, self-knowledge, and favorable attitudes toward VHS. JHS teachers are supposed to give their students more thorough career counseling as early as feasible and to give them access to information about VHS through a variety of media.

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