

# The Construction Of School Satisfaction Scale For Students

Rima Wilantika, Fatwa Tentama

**Abstract:** This research was aimed to analyze the construct validity and construct reliability of school satisfaction and to find the domains that create school satisfaction. School satisfaction was measured by five domains which consisted of family satisfaction, friendship satisfaction, school or education satisfaction, neighborhood satisfaction, and personal satisfaction. The subjects of this research were 70 students of SMK (a vocational high school) "X" in Yogyakarta. The method of collecting the data used school satisfaction scale. The data were then analyzed using Structure Equation Modeling (SEM) SmartPLS 3.2.8 by reflective construct in CFA 2nd Order. The results of the analysis showed that the domains and indicators which formed school satisfaction construct was education satisfaction. The weakest domain which reflected school satisfaction was personal or self-satisfaction. It showed that all school satisfaction domains and indicators could reflect and form school satisfaction construct. Therefore, the measurement model could be accepted because the theory which drew the school satisfaction connected with the data empiric obtained from the subjects.

**Keywords:** Education, Family, Friendship, Neighborhood, Partial Least Square, School Satisfaction, Student

## 1. INTRODUCTION

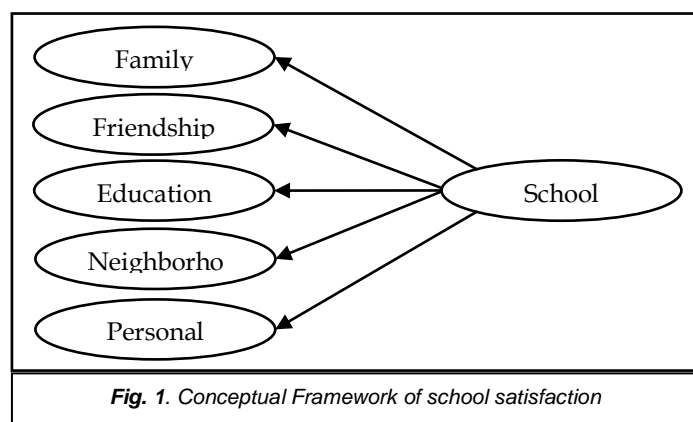
The school is a place to obtain education. It offers chances for people to learn about information, to deepen new skills, to expertize old skills, and to gain friends. School also broadens intellectual and social ability. School quality strongly gives impact to the student's achievement. Students who like to go to school have better academic achievements than those who dislike it. Student will be satisfied to enter the school if they were permitted to participate in creating rule and also when they accepted support from teachers and their friends [1]. The school which adjusts the course and the students' abilities gain students learning reports better than school which tries to teach all students with the same rule [2]. The school satisfaction is important because it can create good impact to the students' psychological condition, students' academic achievement, intrapersonal pressure, social pressure, and behavioral problem [3]. School satisfaction can improve the students' quality of life and cognitive [4]. The student who gets support from teachers and friends can reach student satisfaction in school. Teachers who feel concern to their students and also give emotional support to students also can improve students' satisfaction in school [5]. The negative impacts of student's school satisfaction to the university students are causing the decreasing of student's academic achievement, dropping out, and behavioral problems [6]. Meanwhile, the positive impacts of school satisfaction to the students are improving academic achievement and creating good psychological conditions [7]. The school satisfaction can help students who have problems that are related to their school [8]. The research conducted by Huebner and McCollough [9] stated that school satisfaction influenced students' conditions who face many events and life experiences that were connected with their satisfaction toward their education. Non-education experiences also contributed in creating school satisfaction such as experiences which connected to the family, friendship, recreation, and also physical and mental condition. That research also showed that positive events predicted school satisfaction. Besides, non-academic events also contributed to the school satisfaction.

The school is necessary to create positive learning condition that can be achieved by positive interaction between teachers and students, students and their classmates, and also parents' contribution to improve the students' school satisfaction [10]. Teacher's support impacts student's school satisfaction because the teacher takes important contribution to fulfill student's psychological base need that relates to the competency and school's autonomy [7]. School satisfaction gives significance impact toward student's academic achievement [11]. The student's positive experiences in school have an important influence to their attitude. Therefore, student's satisfaction in school is very important to be understood, to be monitored within the implementation development, and to be evaluated toward their school experiences [12]. The school satisfaction is the development of subjective well-being variable and children happiness. Some researches aimed school satisfaction into three subjective well-being components, such as positive emotion, negative emotion, and life satisfaction [13], [14]. The first and the second components refer to the individual emotion respond, where it is purposed to the cognitive, and respond to evaluate. The previous study believed that children prosperity needed to be conceptualized wider. Therefore, in order to facilitate the research about prosperity among children, the reliable measurement tool and the validation of each subjective prosperity component that include life satisfaction are needed [15].

Next, Diener developed subjective well-being domain namely life satisfaction. Diener stated that life satisfaction in general is cognitive evaluation of an individual toward her/his life otherwise the specific domains are family and friendship. The extensive of life satisfaction initiated Huebner to develop life satisfaction domain that is school satisfaction [15], [16]. Huebner [16] mentioned that school satisfaction was a student's subjective cognitive evaluation about school experience. The student evaluate her/his satisfaction based on her/his own standard or experience supporting with school condition variables such as teacher-students relation, academic course, academic support, student-classmates relation, school management, and also physical and social school environment [17]. Generally, if students gain school satisfaction, they believe that the school creates positives experience and it tends to make them happy [18]. Epstein dan McPartland [19] opined that school report measurement needs to pass through academic variable in order to import the

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school quality such as school satisfaction. The student needs to contribute, include, and feel personally in everything she/he does [20]. The study conducted by Huebner, Drane, and Valois [21] evaluated the school satisfaction level that connected with five domains (family, friend, school or education, neighborhood, and personal). The school experience can be a significance stress resource and can reduce the student's life quality. The school un-satisfaction can be caused by bad academic achievement, negative behavior in school, and dropping out from school [9]. The result of the research conducted by Huebner [15] using student from grade A to D as the subject resulted alpha 0.82. Meanwhile, Huebner's research [16] found that the instrument used by children in various intellectual coefficient ability levels obtained alpha 0.92 for total score, 0.82 for family item, 0.85 for school or education item, 0.85 for friend item, 0.82 for personal item, and 0.83 for neighborhood item. The data showed the adequate reliability for total score and for five subscales. The research also found out the relation between total score for school satisfaction and demographic variable that was consistent with previous research that used children and adults as subjects. The study also used family domain, friendship, school or education, neighborhood and personal. Huebner [22] stated that the school satisfaction was divided into five domains, i.e.: family satisfaction that means the un-harmonious relation between student and the family due to the different perception. The friendship satisfaction means the student tends to take her/his time outside the house, because the students like to hang out with friends. The school/education satisfaction is where student tends to take her/his time in school. The school becomes a place for obtaining knowledge and distributing though developing the student's ability, aptitude, and skill. The neighborhood satisfaction is where students cannot be separated from their resident environment, values and rules that are applied in their neighborhood support students to divine their satisfaction. When the students feel that the rules are fulfilling their urges, they will feel satisfied. Meanwhile, the personal satisfaction is a satisfaction through their selves. The personal satisfaction has an important contribution to define themselves.



*Fig. 1. Conceptual Framework of school satisfaction*

Based on the descriptions above, it can be concluded that school satisfaction is an important thing within the school organization. By looking at the importance of school satisfaction, the research questions in this observation are: 1) is school satisfaction construct valid and reliable? 2) Can the indicator for family satisfaction, friendship satisfaction, school

or education satisfaction, neighborhood satisfaction, and personal satisfaction create school satisfaction? Second Order Confirmatory Factor Analysis (2nd Order CFA) One of many approaches that can be used to observe a measurement tool construct is Confirmatory Factor Analysis. Confirmatory Factor Analysis (CFA) is one of main approaches in analysis factor. CFA can be used to analyze a construct dimensionality. The observation is conducted by measurement model in order to draw the dimension and behavior indicator to reflect the latent variable that is school satisfaction by looking at the loading factor from the domain which forms a construct. Confirmatory Factor Analysis (CFA) is also used to examine construct validity and construct reliability from the indicators (items) that form latent construct [23]. This research used second order confirmatory factor analysis (2nd Order CFA) that means a two levels measurement model. The first level of the analysis was from the latent construct dimension to the indicators and both of the observations were conducted from latent construct to the dimension construct [23]. Based on the explanation above, this research was aimed to examine the construct validity and reliability of school satisfaction and also to find the domains that formed school satisfaction construct.

## 2 METHOD

### 2.1 Population and Sample

The population of this research was students grade XII in a Vocational High School (SMK) "X" in Moyudan, Sleman Yogyakarta that belonged to twelve classes with the 284 total students' numbers. The sample of this research was 70 students majoring in computer network engineering.

### 2.2 Research Design

The design of this research was semi-construct, where the scale design were done using theoretical collaborative studies information that directly obtained from data field. The profit in using semi-construct design was that it could strengthen the previous theory and could multiply the behavioral indicator as much as possible from the data. Later, there would be a psychometric property which included content validity analysis, discriminating power, confirmatory factor analysis, and external concurrent validity testing [24].

### 2.3 Instrument

The data collection was aimed to reveal the fact about the variables that would be examined. This research used school satisfaction scale that was constructed by the authors based on Huerber's [22] domains that consisted of family satisfaction, friendship satisfaction, school/education satisfaction, neighborhood satisfaction, and personal or self-satisfaction. The author used the number of items in the school satisfaction scale totaling 40 items that consisted of 20 favourable items and 20 unfavourable items. The examples of items from the domain of satisfaction with family were "I feel happy because my parents always love me", and "I am happy because my parents always support the positive activities that I do". The examples of items from the friendship satisfaction domain were "I feel valued because my friends always accept my decision" and "I am happy because I have a good relationship with my friends". Later, the example of items from the education satisfaction domain were "I feel valued because my teachers often help me when I have difficulty in learning" and "I am disappointed because my teachers do not care when I

have difficulty in learning". The examples of items from the domain of neighborhood satisfaction are "I am happy because I have many friends in the neighborhood" and "I am sad because I have only a few friends in the neighborhood". The examples of items from the domain of self-satisfaction were "I am grateful because most people I know like me", and "I like to try something new". The distribution of school satisfaction scores can be seen in table 1.

**TABLE 1**  
**SCORE OF SCHOOL SATISFACTION**

Respond Category	Favorable Score	Unfavorable Score
Very Appropriate	4	1
Appropriate	3	2
Not Appropriate	2	3
Very Not Appropriate	1	4

The arrangement of items on this scale is based on five domains. Blue Print School Satisfaction Scale can be seen in table 2 below.

**TABLE 2**  
**BLUE PRINT FROM SCHOOL SATISFACTION**

Domain	Indicator	Item		Total
		Favo	Unfavo	
Family Satisfaction	a. There is love and support in the family	1,11, 21,31	6,16, 26,36	8
	b. There is an open and mutual trust communication in the family			
Friendship satisfaction	a. There is a good friendship	2,12, 22,32	7,17, 27,37	8
School or education satisfaction	a. There is a good relationship between the school community	3,13, 23,33	8,18, 28,38	8
	b. There are adequate school facilities			
Neighborhood satisfaction	a. Individuals follow the values that apply in the neighborhood	4,14, 24,34	9,19, 29,39	8
Personal Satisfaction	a. Individuals can be the desired person.	5,15, 25,35	10,20, 30,40	8
	Total	20	20	40

## 2.4 Construction Validity and Reliability

### 2.4.1 Construct Validity

The research methodology used smartPLS program aimed to test the outer model. This measurement model was to test the validity and reliability of the construct, which consisted of: convergent validity to see the loading factor value > 0.5 and the extracted average variance value. The discriminant validity for comparing root average variance between domains must be higher than other variables. The reliability test that consisted of Cronbach's alpha must be greater than 0.7, while the composite reliability variable must be greater than 0.7.

### 2.4.2 Constructive Reliability

Reliability test was carried out to show the internal consistency of the measuring instrument by looking at the value of

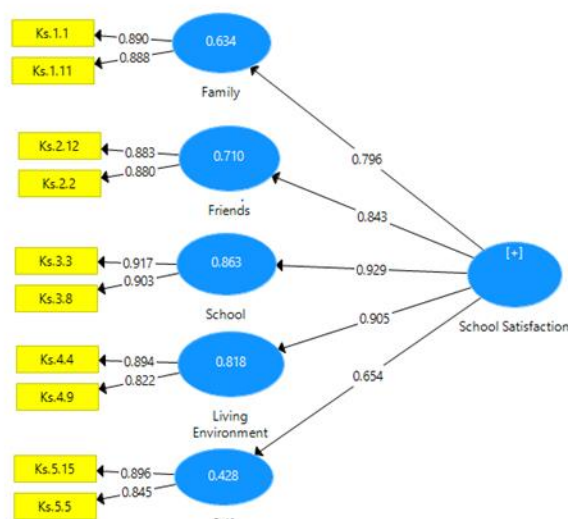
composite reliability and Cronbach's alpha with a higher value. It would show the consistency value of each item in measuring latent variables. According to Hair [25] the expected composite reliability and Cronbach's alpha value is > 0.7 and the value 0.6 is still acceptable. Then, according to Cooper the internal consistency test has also been met if the validity of the extract has met the criteria so that the average variance extracted (AVE) value has been met represent internal consistency, because a valid construct is a reliable construct but on the contrary a reliable construct is not necessarily a valid construct [26].

## 2.5 Data Analysis

The data were analyzed using the SmartPLS 3.2.8 program with reflective constructs through the 2nd Order CFA. According to Hartono and Abdillah [27] PLS is a variance-based structural equation analysis (SEM) that can simultaneously test measurement models to test validity and reliability.

## 3 RESULT

Based on the outer model test analysis on the life satisfaction scale conducted using the SmartPLS 3.2.8 program, the results can be seen as shown in the figure below:



**Figure 2.** Results from the outer test of the School Satisfaction

## 3.1 Convergent Validity

Based on the results of the convergent validity, the factor loading values between variables > 0.5 can be seen in the table below.

**TABLE 3**  
**LOADING FACTOR (VARIABLE-DOMAIN FACTOR)**

Domain	Loading Factor	Information
Family Satisfaction	0.796	Valid
Friendship Satisfaction	0.843	Valid
Education Satisfaction	0.929	Valid
Neighborhood Satisfaction	0.905	Valid
Personal Satisfaction	0.654	Valid

Based on the results of the convergent validity the factor loading values between domain-indicators > 0.5 can be seen in the table below:

**TABLE 4**  
**LOADING FACTOR (DOMAIN-INDICATOR)**

Indicators	Loading Factor	Information
Ks.1.1	0.890	Valid
Ks.1.11	0.888	Valid
Ks.2.12	0.883	Valid
Ks.2.2	0.880	Valid
Ks.3.3	0.917	Valid
Ks.3.8	0.903	Valid
Ks.4.4	0.894	Valid
Ks.4.9	0.882	Valid
Ks.5.15	0.896	Valid
Ks.5.5	0.845	Valid

The next convergent validity test is the average variance extracted (AVE) construct of school satisfaction shows 0.549, and the AVE value of each domain > 0.5 can be seen in the table below:

**TABLE 5**  
**THE VALUE OF AVERAGE VARIANCE EXTRACTED (AVE) SCHOOL SATISFACTION**

Domain	AVE Value	Information
Family Satisfaction	0.759	Valid
Friendship Satisfaction	0.791	Valid
Education Satisfaction	0.777	Valid
Neighborhood Satisfaction	0.828	Valid
Personal Satisfaction	0.737	Valid

### 3.2 Discriminant Validity

Discriminant values between one domain to another have met the requirement. The root value of AVE between domains is higher than the roots value of AVE, the result can be seen in the table below:

**TABLE 6**  
**ROOT VALUE AVERAGE VARIANCE EXTRACTED (AVE) SCHOOL SATISFACTION**

Domain	FES	FRS	EDS	NES	PES
FES	0.889	0.637	0.620	0.671	0.607
FRS	0.637	0.882	0.751	0.692	0.571
EDS	0.620	0.751	0.910	0.850	0.530
NES	0.671	0.692	0.850	0.859	0.409
PES	0.607	0.571	0.530	0.409	0.871

Validity Construct in SEM (Confirmatory Factor Analysis or CFA) shows that all four indicators are valid with a loading factor value ( $\lambda$ )  $\geq$  0.5.

### 3.3 Construction Reliability Test

Composite reliability value and cronbach alpha > 0.7 can be seen in table 7:

**TABLE 7**  
**VALUE COMPOSITE RELIABILITY AND CRONBACH'S ALPHA SCHOOL SATISFACTION**

Variable	Composite Reliability	Cronbach's Alpha	Information
Kepuasan Bersekolah	0.940	0.930	Reliable



## 4 DISCUSSION

Based on the results of the analysis of construct validity and construct reliability, the domains and indicators that make up school satisfaction are valid and reliable. This shows that all existing domains and indicators are capable of reflecting and establishing the construct of school satisfaction. The most dominant domain is education satisfaction with loading factor 0.929. School satisfaction is illustrated by the good relations between the school community, especially teachers and the existence of adequate school facilities that make individuals feel satisfied with the facilities that are provided there. Individuals feel valued and happy because the teacher is willing to help when they have difficulty doing their assignments. Students also feel happy if the school offers facilities for playing, eating (canteen), learning facilities and others. The second most dominant domain is the domain of satisfaction with the neighborhood with a loading factor of 0.905. The satisfaction with the neighborhood is demonstrated by the willingness of individuals to follow the values that apply in the residential environment. A concrete example is when students are happy because they have many friends in their neighborhood and can play together with their friends. The third domain is friendship with loading factor 0.843. Friendship satisfaction is illustrated by the existence of good friendships between individuals and their school friends. Individuals feel valued because their friends can accept their opinions and can play together. The fourth domain is family satisfaction with a loading factor of 0.796. Family satisfaction is illustrated by the love and support in the family, and the open communication and mutual trust within the family. This concrete form of satisfaction is the individual feels happy when parents advise him and always support the positive activities undertaken. The lowest domain that reflects student's school satisfaction is the domain of personal satisfaction with a loading factor of 0.654. Personal satisfaction is illustrated by the ability of individuals to become the desired person. The behavior that was shown is that individuals have a sense of gratitude for what is received from the environment from small things like having many friends and being liked by their friends, besides individual also feel happy to try something new. The previous studies used the MSLSS scale as same as this research. So, it can be said that the scale has been proven valid and can be used as a good measurement tool for research [4], [7], [12]. The domains that are used in this research are also as same as the domains used in previous studies, namely the domain of satisfaction with family, satisfaction with friendship, satisfaction with school or education, satisfaction with the environment of residence and satisfaction with oneself. The results of this study are expected to provide an overview of the validity and reliability of school satisfaction construct. So, it can be used as a reference in further research related to school satisfaction. The findings of this study can also provide theoretical implications in the development of school satisfaction theory.

## 5 CONCLUSION

Based on the results of the analysis and discussion, it can be concluded that the school satisfaction construct meets good validity and reliability. All domains or indicators variables can significantly form school satisfaction variables where indicators and domains that have dominant influences on school satisfaction are school or education satisfaction with a loading factor of 0.929. And the cronbach alpha value was 0.930.

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