

# Development of Student Leadership Variables Instruments: Validity and Reliability Analysis

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## ABSTRACT

A valid and reliable research instrument is an important element in quantitative research. This study aims to develop a valid and reliable instrument for measuring student leadership ethics variables. The instrument developed was in the form of a questionnaire. The preparation of the questionnaire refers to the theory put forward by Gunawan [1] and Rukmana [2], regarding leadership ethics in organizations. From the results of the instrument development, 21 item statements were compiled to measure these variables. Validity test using the Pearson Product Moment Correlation formula. Reliability test using the Cronbach's Alpha formula. Data analysis software used to test validity and reliability is IBM SPSS Statistics 24. The results of the validity test obtained from 21 items, which were declared valid there were 20 items, because it has a sig value < 0.05. The reliability results concluded that the instrument had high consistency, with  $r_{\alpha} = 0.914 > r_{\text{table}} = 0.320$ .

**Keywords:** student leadership ethics, validity, reliability

## 1. INTRODUCTION

A leader should know and have values and ethics in leadership. The aim is that it is believed that it will bring life to a condition that does not cause negative effects that are detrimental to the life around it. In an organization, leadership is considered good if leadership functions are carried out based on ethical principles [3]–[5]. Ethical leadership will make the working relationship atmosphere in the organization more comfortable and avoid vertical and horizontal conflicts. This is because organizational actors are aware of the existence of guidelines and guidelines in the form of ethical principles that limit their behavior and actions.

Ethics can be divided into three meanings, namely: (1) knowledge of what is good and bad; (2) a set of principles or values; and (3) values regarding true and false. By distinguishing these three ethical definitions, readers can understand more fully about what ethics is, and at the same time better understand the notions of ethics that often appear in everyday speech, both orally and in writing. The object of ethics is the changing realm, especially the human realm. Leadership is very influential on the organization, leadership must also be accompanied by values and ethics as it should be [6], [7].

Avolio, et al., [8] developed a theoretical framework regarding employee empowerment, a psychological dimension that mediates the relationship between ethical behavior of leaders and employees, organizational commitment, and employee trust in leaders. Avolio, et al., [8] argued that authenticity (for example, consistency between goodwill and ethical behavior of leaders) has a moderate relationship between ethical leader's behavior and employee performance. So the behavior of a leader can affect employee attitudes and performance. Ideally, the leader is obliged to set a moral role model for members of the organization and determine the activities of the organization.

What values are needed by a leader? What ethics are needed by a leader? This question is the foundation for a leader who has an important role in moving an organization. Ethics comes from the word Ethos (Ancient Greek) which means decency. Ethics which means norms, rules and regulations. Position ethics or principal ethics are intended as the position and standard behavior of the principal in carrying out his leadership duties [9], [10].

Ethics is a personal value system that is used to decide what is right, or what is most appropriate, in a given situation to decide what is consistent with the existing value system in the organization and the person.

Ethics is normative standard behavior in the form of moral values, norms, and good things. Basically, if the value is agreed upon, it is called a norm. These norms will be used as a measure for someone to be called ethical or not. Thus, living an ethical life is believed to bring life in a condition that does not cause negative effects that are detrimental to the life around it. From an evolutionary perspective, the ethical dimension can be a key factor in the success of a leadership. In an organization,

## 2. METHOD

This study aims to test the questionnaire instrument used to measure student leadership ethics variables. The instrument is in the form of a questionnaire. The development of indicators and

questionnaire statements refers to the theory put forward by Gunawan [1] and Rukmana [2]. The descriptions of the variables of student leadership ethics are presented in Table 1. The variables of student leadership ethics are translated into 7 indicators and 21 statement items. Respondents of this study were 38 students of UKM KSR PMI Unit State University of Malang (student organization which is engaged in the field of red cross).

Testing the instrument by testing the validity and reliability [11]–[13]. Validity test using the Pearson Product Moment Correlation formula. Item is declared valid if the value is  $\text{sig.} < 0.05$  [11]. Reliability test using the Cronbach's Alpha formula. Items are declared reliable if  $r_{\text{alpha}} > r_{\text{table}}$ , and the  $r_{\text{table}}$  value for  $N = 38$  is 0.320, at the 0.05 significance level. Validity and reliability tests use the IBM SPSS Statistics 24 program.

**Table 1 Descriptions of Student Leadership Ethics Variable Indicators**

Variable	Indicator	Item
Student Leadership Ethics (Gunawan [1]; Rukmana, [2])	1. Take care of other people's feelings	1, 2, 3
	2. Solve problems with humility	4, 5, 6
	3. Avoiding coercion, but respecting the opinions of others	7, 8, 9
	4. Prioritizing the dialogical process in solving problems	10, 11, 12
	5. Responding to a problem quickly and according to expertise	13, 14, 15
	6. Realize your mistakes and try to improve	16, 17, 18
	7. Promote honesty, discipline, and can be trusted	19, 20, 21

**Table 2 Results of the Validity Test of Student Leadership Ethics Variables**

No.	Questionnaire Statement	Pearson Correlation	Sig. (2-tailed)	Note
1	Using polite language is necessary for everyone so as not to offend others	.562	.000	Valid
2	Keeping body movements when communicating with others is necessary to maintain comfort when socializing	.662	.000	Valid
3	When talking to others it is necessary to keep a good eye on it	.647	.000	Valid
4	Organizational problems are resolved by means of deliberation wisely	.588	.000	Valid
5	A leadership policy as a form of effort to solve organizational problems is decided collegially	.562	.000	Valid
6	All input from organizational members is a valuable asset for the organization in solving problems	.731	.000	Valid
7	Coercion of the will, whether it comes from the leadership of the organization or not, is a characteristic of an unhealthy organization	.494	.002	Valid
8	All members have the same right to speak for the betterment of the organization	.571	.000	Valid
9	All opinions of members of the organization are as valuable as the performance of the members	.656	.000	Valid
10	Deliberation characterizes the organization	.583	.000	Valid
11	Collective collegial dialogue at the ranks of the organization leadership becomes an organizational culture	.395	.014	Valid
12	Each member has the same rights in organizational deliberations tailored to their field of expertise	.642	.000	Valid
13	Organizational leaders have the ability to predict problems that occur in the future	.253	.125	Invalid
14	Good organizational alacrity skills are needed in solving problems that occur	.740	.000	Valid
15	Each problem is solved by a team or division in accordance with their area of expertise	.535	.001	Valid
16	When something goes wrong, the organization's first step is to find the causes of the problem and determine alternative solutions	.769	.000	Valid
17	The mistakes made by the organization are a process of organizational maturation / growth	.608	.000	Valid
18	It is the joint responsibility of all elements of the organization to minimize and / or solve problems	.677	.000	Valid
19	Honesty in work becomes a general guideline for the work of every element of the organization	.588	.000	Valid
20	Discipline in work has become part of the work climate of the organization	.687	.000	Valid
21	The organization trusts its members to be able to carry out their duties	.722	.000	Valid

### 3. RESULTS

Table 2 presents the results of the validity test of the student leadership ethics variable, as measured by 21 statement items. Based on the results of the validity test, it is known that of the 21 items declared valid, there are 20 items because of the sig. value < 0.05; and there is one item (number 13; indicator number 5) which is declared invalid because of the sig. value > 0.05. From the results of the validity test, it is concluded that there are 20 items that can be used to measure the variables of student leadership ethics; while 1 invalid item was removed from the questionnaire, because there were 2 other indicators that could be used to measure the indicators on the invalid item.

After the validity test is carried out, the instrument is tested for reliability. The reliability test was only carried out on valid items on the instrument, namely 20 valid

items. Table 3 and Table 4 present the results of the reliability test. Based on Table 3, it is known that  $r_{\alpha} = 0.914 > r_{\text{table}} = 0.320$ . Based on Table 4 it is known that all Cronbach's Alpha if Item Deleted > 0.320. The results of the reliability test concluded that the student leadership ethics variable instrument was declared reliable. This means that the structured instrument has high consistency to measure the student leadership ethics variable. Therefore, the instruments that have been developed by researchers can be used by other researchers to measure the variables of student leadership ethics.

**Table 3 Reliability Statistics**

Cronbach's Alpha	N of Items
.914	20

**Table 4 Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Note
it1	68.24	36,726	.506	.912	Reliable
it2	68.53	34,743	.607	.909	Reliable
it3	68.50	35,608	.591	.910	Reliable
it4	68.21	36,549	.574	.910	Reliable
it5	68.61	35,975	.534	.911	Reliable
it6	68.34	34,988	.671	.908	Reliable
it7	68.55	36,092	.453	.913	Reliable
it8	68.37	35,807	.523	.911	Reliable
it9	68.50	35,014	.623	.909	Reliable
it10	68.34	36,069	.555	.910	Reliable
it11	68.71	36,860	.321	.917	Reliable
it12	68.53	35,391	.562	.910	Reliable
it14	68.37	35,158	.709	.907	Reliable
it15	68.63	35,590	.451	.914	Reliable
it16	68.32	35,249	.728	.907	Reliable
it17	68.45	35,930	.542	.911	Reliable
it18	68.32	35,844	.614	.909	Reliable
it19	68.21	36,603	.563	.911	Reliable
it20	68.37	35,482	.649	.908	Reliable
it21	68.42	35,277	.664	.908	Reliable

### 4. DISCUSSION

Leadership and power have an inseparable attachment, because to become a leader is not only based on liking each other, but many factors [4], [14]–[16]. Successful leaders should have several criteria depending on the point of view or approach used, whether it is their personality, skills, talents, traits, or their authority, which will greatly influence the theory and leadership style that will be applied [17], [18]. The main secret of leadership is that the greatest strength of a leader is not from his power, not his intelligence, but from his personal strength. A true leader always works hard to improve himself before he is busy improving others.

Leader is not just a title or position given from outside but something that grows and develops from within a person. Leadership is born from an internal process (leadership from the inside out), namely by having good values and ethics in leadership. Blanchard & Peale [19] divide leadership ethics into five types. First, behave in such a way that is in line with the goal, namely the path that

you want to travel in this life, the path that gives meaning and meaning to life. A clear personal goal is the basis for ethical behavior. A clear organizational goal will also reinforce ethical organizational behavior. Second, conduct yourself in such a way that you feel personally proud of your own behavior. Self-confidence is a powerful tool set for ethical behavior. Isn't self-confidence a sense of pride mixed with humility in a balanced way that will foster strong confidence when someone has to face a dilemma in determining an ethical attitude.

*Third*, behave patiently and full of confidence in your decisions and yourself. Patience helps a person to be able to keep choosing the best behavior in the long run, as well as prevents a person from being trapped by things that happen suddenly. Fourth, behave steadfastly. This means behaving ethically at all times, not just when it is comfortable to do so. A leader who has ethics, has the toughness to stay on goal and achieve what he dreams of. Fifth, behave consistently with what really matters. This means the leader must maintain perspective.

The ethics in leadership are: (1) guarding the feelings of others; (2) solve problems with humility; (3) avoiding coercion but respecting the opinions of others; (4) prioritizing the dialogical process in solving problems; (5) responding to a problem quickly, and according to expertise; (6) realizes mistakes and tries to correct them; and (7) promote honesty, discipline and trustworthiness. The objectives of leadership ethics are to: (1) guide principals in their behavior; (2) avoid negative and destructive behavior; (3) develop professionalism; (4) forming the image of the principal; and (5) living up to the philosophy of education [20].

In addition, the attitude or actions that must be taken by a leader must be consistent in their attitudes and work methods [10], [21]–[23]. People who play the role of a leader should never look for their own name scent, by using their subordinates as a means of carrying out their plans, but must pay attention to the spirit of sacrifice and perseverance and mutual cooperation in order to achieve educational progress in their work groups and must also focus their attention on the results of their efforts. The efforts of his peers towards achieving common goals and carrying out the educational plans in his school. Leaders who want to make progress in their school education program must realize that good human relationships are an important foundation in leadership [24], [25].

The importance of human relations here can also affect leadership because if a leader is unable or unable to establish good relationships with various parties, especially good relations with his subordinates [23], [26], then his subordinates themselves will not be able to follow the leadership style that is being carried out by the leader. So that if there is no good relationship between the leader and subordinates, then the leader cannot be called a leader.

Ethics in leadership is needed because it supports the sustainability of values. A leader must not only pay attention to values, but also must comply with the prevailing ethics in the environment [1], [27], [28]. In every action must always think whether it is right and it is wrong to do [29]. Paying attention to whether his actions are in accordance with the prevailing values in society and whether the actions are appropriate for a leader who is a role model for his subordinates.

## 5. CONCLUSION

The results of the validity test of the student leadership ethics variable instrument concluded that there were 20 valid items that could be used to measure these variables. The results of the reliability test of the student leadership ethics variable instrument concluded that the instrument had high consistency with a value of  $r_{\alpha} = 0.914$ . So it can be concluded that the valid items on the instrument are valid and reliable for measuring the variable of student leadership ethics.

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