The role of instructional leadership for students pro-ecology behaviour

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Abstract. Environmental protection and recovery are the main challenges facing our society today, therefore it is important to know and understand more about pro-ecology behaviour, and what factors influence it. The study was conducted to explain the effect between Instructional Leadership on Student Pro-ecology Behaviour Quantitative method was used to analyse the results. In addition to this, the survey also used through expose fact studies. The sampling was carried out by means of multistage random sampling using the selected 100 students of MAN 6 East Jakarta. From 100 people divided into two groups that gave an assessment of Instructional Leadership below the average of 50 people and above the average of 50 people. Data analysis using t-test to test whether there is influence between Instructional Leadership on Pro-ecology Behaviour. Two opinion instruments have been developed which produce new concepts about Instructional Leadership and pro-ecology behaviour, each of which is 30 items that are valid and reliable. Distribution of descriptive and inferential data. The next finding is the influence between Instructional Leadership on the Pro-ecology Behaviour that is significant \( t = 1.83 > t_{table} = 1.67 \) \( \alpha = 0.05 \) df: 48. This shows a high or low level of positivity. The student pro-ecology behaviour was not caused by its assessment of the Melian Instructional Leadership Teacher but because of other factors. Other factors are recommended for further research both internal and external factors. The massive external factor influencing students is probably social media in the era of industrial revolution 4.0.

1. Introduction
This study, intentionally selected instructional leadership model because (1) is relevant to the field of expertise of researchers; (2) school is a place of learning, as a logical consequence, the appropriate leadership, namely instructional leadership; (3). instructional leadership of MAN 6 East Jakarta model has never been studied; (4). instructional leadership is leadership in the future [1], (5). instructional leadership is the most important component in improving students' learning processes and outcomes [2]; (6). The Interstate School Leaders Licensure Consortium (ISLLC) emphasizes the importance of instructional leadership furthermore, how instructional leadership plays a role as a negative positive determinant of students' pro-ecological behaviour. As developed from the researcher model, namely environmental behaviour adapted from by as shown in Figure 1.
The environmental behavior model was developed by Hines, 1987. Which was influenced by various variables. Pro ecology behavior is related to several variables, namely: (1) personality factors (attitude, locus of control, personal responsibility); (2) awareness; (3) knowledge of strategic actions; (4) acting skills; (5) intention to act; and (6) situational factors. As seen on the figure, this research would focus on the role of instructional leadership for students pro ecological behaviour.

2. Method
This research would use quantitative method. Quantitative or Quantitative Research is a research method that is inductive, objective and scientific in which the data obtained is in the form of numbers (scores, values) or statements that are valued, and analyzed by statistical analysis. Quantitative research is usually used to prove and reject a theory. Because this research usually departs from a theory which is then examined, the data is generated, then discussed and taken conclusions.

3. Literature review
Hines, Hungerford, and Tomera conducted a meta-analysis of research that sought to apply the behavioural framework theory planned for the prediction of ecology behaviour, the aim of which was to determine variables (cognitive, psychosocial, and demographic) that were strongly related to pro ecology behaviour and relative strength of variables with each other [1]. They found that variables such as (in the order of correlational strength), intention, locus of control, attitudes, personal responsibility, and knowledge, were significantly correlated with pro ecology behaviour. Thus the pro ecology behaviour has a correlation with the variable intention, locus of control, attitude, personal responsibility, and knowledge. Locus of control or control centre is one of the important aspects in human personality characteristics. Locus of control can also be said as a person's assumption about him, the extent to which he can understand the relationship between the effort he did and the consequences he faced. In this case the individual will develop expectations related to controlling the events in his life [2].

Figure 2 illustrates a relationship in a linear form that is synergistic between several variables. The Hines model shows that someone who expresses a desire to take action will be more likely to be happy to take action than without desire (intention).

Willingness to act someone is influenced by personality factors such as attitudes toward the environment, locus of control and personal responsibility for the environment. According to International Journal of Social and Behavioral Sciences, Vol. 198 issue. Writing by Mariela Pavalachilie, Ecaterina Maria Unianu (Locus of control and the pro-environmental attitudes), this study examined the relationship between locus of control and pro-environment attitudes of 112 students Psychology. The instrument used was the Multidimensional Locus of Control model from Levenson. The results showed that there was a significant relationship of internalization with the ecocentric paradigm. This
research suggests it is important to foster internalization, reduce control in the power of others and need to stimulate young people to become members of ecological associations [3].

In addition, Anna Uttoo, Jelle Boeve-de Pauw, Seppo Saloranta from the Department of Teacher Education, University of Helsinki, Finland, have examined how school participation related to sustainability affects the ecological behavior of adolescents outside of school with a sample of 2361 adolescents Finland is used to test hypothetical models. The results of the study show that school institutions and prosocial experiences increase the value of adolescent pro-environment, personal norms and self-efficacy. School experience and prosocial experience have a stronger effect on psycho-social construction, while the influence of ecological experience is low. Researchers suggest that sustainability education in schools should not only provide ecological experience, but more importantly link pro-social experience through approaches that emphasize pro-environment values and self-efficacy for ecological behavior [4].

Husaini Usman found in his research that there was a significant relationship between instructional leadership and the level of teacher commitment in three schools in Pahang, and there was also a significant relationship between instructional leadership and student character formation. Research related to Pro Ecology Behavior based on instructional leadership is still difficult to find.

The role of Instructional Leadership is important and strategic in shaping the character of the students' environment especially in the aspects of Pro Ecology Behavior. A teacher is required professionalism in carrying out his noble duties. Teacher professionalism is characterized by its capacity which indicates an indication that the teacher has professional competence. Pedagogic, personality and social. These four competencies become one that is displayed in learning as well as in classroom management. The focus on classroom management aspects that are part of the pedagogical competencies in it are aspects of instructional leadership. For this reason, it is necessary to explain what leadership is and what is instructional and what is instructional leadership.

Leadership is an important factor in efforts to achieve in an organization in achieving goals. Likewise, in terms of learning in the Teacher's class, as well as educators as managers and leaders in the classroom in managing their classes to achieve the goals set in each meeting and in each semester. Leadership is how a teacher influences students to have dreams, feelings and expectations that are in line with the expectations of the teacher and parents at home. As quoted by Coleman that Leadership according to Coleman is the act of influencing other people to achieve the expected final goal [5]. Likewise, Bush, supported by Yukl, stated that leadership is the process of influencing others to understand and approve what is needed in carrying out tasks, and how to carry out those tasks, and processes to facilitate individual and group efforts in achieving their goals. Hemphill and Coons in Gary Yukl define leadership as individual behavior that directs group activities to achieve common goals. So that it can be said that leadership as a process of giving a purpose (meaningful direction) to a collective business, which causes an effort to reach the goal [6].

Instructional in the context of instructional design and educational technology is a technical term with understanding as stated by Gagne and Briggs.

Instructional is a set of events which affect learners in a way that learning is facilitated [7]. Learning is defined as an activity that has an influence on students in such a way that behavior changes occur as a result of the learning process. As a technical term, learning or instructional has stages as an instructional system as a whole, starting from instructional design, implementation, to evaluation. These stages function together to achieve a certain goal that has been set.

Learning is not limited to intellectual or cognitive processes alone but can also take the form of a behavioral or affective attitude formation process [8]. The formation of behavioral attitudes involves giving examples or models to emulate students. Examples or models that can come from teachers or other people. Learning is defined as the whole mechanism and learning process carried out by educators to students by involving all components of learning to support the achievement of learning goals. In addition, learning can be interpreted as taking advantage of all learning objects that are useful for improving attitudes and mental life intellectually, emotionally, and spiritually [9].
Instructional leadership is defined as monitoring the progress of students, providing constructive feedback, maintaining high academic standards, and making active observations of the process of progress in the study of students. Instructional leadership includes teachers and parents in school decisions, such as choosing textbooks, influencing learning, and participating in maintaining locally developed school development plans.

The instructional leadership played by teachers as educators in schools is to make the teacher a profession. The teacher's profession by developing it goes beyond his leadership role in the classroom. Furthermore, Murphy and Louis suggest that the principle of teacher leadership is based on classroom activities, with effective teaching as a precursor to teacher leadership, so that it is connected between teaching, learning. Teacher leadership is collaborative work which is primarily about making things different for students. Encouraging students to make changes and innovation is an important / main part in the context of teacher leadership [10].

The population in this study were high school students in East Jakarta. Sampling is done by multistage random sampling, namely: (1). The area of the sample area was determined in advance, in this case the high school / MAN school in East Jakarta was chosen by means of a purposive cluster random sampling; (2) Through cluster sampling schools are determined in the East Jakarta area, namely MAN 6 East Jakarta. (3) Then it was chosen again in cluster random, namely class X which consisted of 4 classes, so that 4 classes were selected consisting of 25 students in each class. Then the respondents in this study were 100 people.

To obtain data in this study used instructional leadership opinion (X), and pro ecology behavior (Y). Pro Ecology Behavior, Pro ecology behavior is the action of someone consciously and voluntarily to do a useful work for the environment in order to achieve the goal of sustainable development goals (SDGs). Pro ecology behaviour in this research is the action of MAN 6 East Jakarta class X students consciously and voluntarily to do a useful work for the environment in order to achieve the goals of sustainable development goals (SDGs), measured through instruments containing statements with five alternative answers (Likert scale ) namely: a) always, b) often, c) sometimes, d) rarely, e) never, given for each answer in the form of successive intervals starting from a score of 5-1 for positive and vice versa question answers -according to a score of 1-5 for negative answers,

4. Results and discussion
This research has produced a new concept about Pro ecology behavior and instructional leadership. These are the following:

| No | Pro ecology behaviour                          | Opinion Item Number | Number of items |
|----|-----------------------------------------------|---------------------|-----------------|
| 1  | Natural compensation                          | 4,21,               | 2               |
| 2  | stay clean                                    | 2,5,8,9,10,        | 5               |
| 3  | wise in energy use                            | 7,13,14,15,16,19,23,24,28,29 | 10          |
| 4  | support environmental policies                | 12,18,22,26        | 4               |
| 5  | use environmentally friendly products         | 17,20,25,27,30     | 5               |
| 6  | love the environment                          | 1,3,6,11           | 4               |
|    | Number of Item Statement                      |                     | 30              |

Table 1. Building Pro ecology behaviour concepts.
Table 2. Building instructional leadership concepts.

| No | Item number | Total |
|----|-------------|-------|
| 1  | 7,8,11,12,13,15,23 | 7     |
| 2  | 1,2,3,4,5,18,19,20 | 8     |
| 3  | 6,9,10,14,16,17,22,24 | 8     |
| 4  | 21,28,29,30,25,26,27 | 7     |

Number of Item Statement 30

Data Pro ecology behavior of groups of students who give an assessment Instructional leadership below the average is as follows

Table 3. Pro-ecology data behavior of groups of students who assess instructional leadership below average (Y1).

| Score | x_i | x_i - \( \bar{x} \) | \( | x_i - \bar{x} | \) |
|-------|-----|---------------------|----------------|
| 44-48 | 46  | -11.5               | 11.5           |
| 49-53 | 51  | -6.5                | 6.5            |
| 54-58 | 56  | -1.5                | 1.5            |
| 59-63 | 61  | 3.5                 | 3.5            |
| 64-68 | 66  | 8.5                 | 8.5            |
| 69-73 | 71  | 13.5                | 13.5           |
| 74-78 | 76  | 18.5                | 18.5           |

\[ \sum |x_i - \bar{x}| = 63.5 \]

Figure 2. Pro ecological behavior.
Table 4. Pro-ecology behavior descriptive data.

|         | Y1   | Y2   |
|---------|------|------|
| Average | 57.5 | 62.7 |
| Median  | 56.57| 63.5 |
| Modus   | 53   | 64.7 |
| Standard deviation | 4.003 | 3.83 |
| Variance | 16.03 | 14.7 |

Data Pro ecology behavior of groups of students who give an assessment Instructional leadership above the average is as follows

Table 5. Data on ecology behavior of groups of students who assess instructional leadership above average (Y2).

| Score | x_i | x_i - x | | x_i - x |
|-------|-----|---------|-----------------|
| 44-48 | 46  | -16.7   | 16.7            |
| 49-53 | 51  | -11.7   | 11.7            |
| 54-58 | 56  | -6.7    | 6.7             |
| 59-63 | 61  | -1.7    | 1.7             |
| 64-68 | 66  | 3.3     | 3.3             |
| 69-73 | 71  | 8.3     | 8.3             |
| 74-78 | 76  | 13.3    | 13.3            |

Σ | x_i - x | = 61.7

Test the Similarities of Two Average

To calculate the similarity of two averages using a formula

\[ t = \frac{\bar{x}_1 - \bar{x}_2}{s \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \]

\[ t = \frac{63.06 - 57.42}{15.36 \sqrt{\frac{1}{50} + \frac{1}{50}}} \]

\[ t = \frac{63.06 - 57.42}{15.36 \sqrt{0.04}} \]

\[ t = \frac{63.06 - 57.42}{63.06 - 57.42} \]

\[ t = \frac{15.36 \times 0.2}{5.64} \]

\[ t = \frac{3.07}{0.2} \]

\[ t = 1.83 \]

So, the result of t count is 1.83

With df = 48, then table is t, 095 = 1.67

So successfully rejecting the null hypothesis which states there are no differences in Pro ecology behaviour between groups of students who give high and low instructional leadership ratings.

5. Conclusion

It can be concluded that there is a low level of positivity which means that the pro-ecology behavior of the students is not caused by the assessment, however there is other factors which influenced them. These factor can be internal and external factors. The majority influence come from the external, in
which social media really have a huge impact towards student’s pro-ecology behavior. It is suggested that students should be carefully in developing and using social media for their daily life.

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