

The Effect of Personal Commitment and Personal Investment, Intention to Act on Students' Citizenship Behaviour (A 2016 Causal Study From Students of East Java)

Stien J. Matakupan, I Made Putrawan, Amos Neolaka

Abstract: *Citizenship behaviour concept is normally use to identify the quality of activities conducted by people to act towards the environment in ways that are more responsible. The research aimed at finding out the information about the effect of personal commitment, personal investment, and intention to act on students' citizenship behaviour. A survey was used by involving 170 students as sample. There were four instruments for measuring, citizenship behaviour (18 items, reliability .884), intention to act (20 items, reliability .909), personal investment (17 items, reliability .895), and personal commitment (12 items, reliability .776). Data was analyzed by descriptive statistical analysis, inferential statistics for linearity and path analysis. Students' citizenship behaviour significantly affected directly by intention to act. Intention to act itself were also significantly affected by personal commitment and personal investment. The research was also found that all indirect effect significantly affect students' citizenship behaviour. Based on the findings it could be revealed that any changing or variation occurred in student's citizenship behaviour might have been directly significant effected by student's personal commitment and student's personal investment and indirectly significant effected by intention to act. Hence, if we want to minimize the variation occurred in student's citizenship behaviour, factors such as students' personal commitment, personal investment, and intention to act are important to be taken into account.*

Index terms : *citizenship behavior; intention to act; personal commitment; personal investment.*

I. INTRODUCTION

As a country rich in biodiversity, Indonesia faces many environmental problems that anchored in the society and the way people live their life. These issues are so pronounced. some of them are deforestation, loss of biodiversity and air pollution. According to The World Bank, Indonesia is categorize as the top contributors to climate change together

Revised Manuscript Received on December 22, 2018.

Stien J. Matakupan, Department of Environmental Education, Postgraduate Faculty, State University of Jakarta-Indonesia
Author Email: stien.matakupan@gmail.com

I Made Putrawan, Department of Environmental Education, Postgraduate Faculty, State University of Jakarta-Indonesia, Author Email: putrawan.imade@unj.ac.id

Amos Neolaka, Department of Environmental Education, Postgraduate Faculty, State University of Jakarta-Indonesia
Author Email: amos_neolaka@yahoo.com

with USA and China. The research identified that 75% of the gas emission came from forest fire and land conversion

and energy 9%. If we try to identify the reason behind this problem, the research conducted by British Council in Indonesia in 2008 could give us some data. At that time, The research concluded that many Indonesian students as well as teachers in lacked of knowledge about human contribution to climate change [2]. Even Indonesia has been conducted various environmental education and education for sustainable development program, but seems that the program did not really focus on the change in learner behaviour. Therefore, in regards to improve the quality of people behaviour, there is a need to develop awareness on environmental issues, critical thinking skills, and active participation in environmental actions. There is a need to develop a program that not only cover cognitive domain of all learners, but also encourage them to make commitment in their life style and their consumption pattern. Enable them to make wise decision in selecting some personal investment for the quality of personal life as well as the life of other people and generations to come.

This study examined the direct effects of intention to act on students' citizenship behaviour, the direct effect of personal commitment on students' intention to act, the direct effect of personal investment on students' intention to act, the indirect effect of students' personal commitment on their citizenship behaviour through students' intention to act, and the indirect effect of students' personal investment on their citizenship behaviour through students' intention to act.

In our endeavour efforts to solve various environmental problems both in local and international level, citizenship behaviour is one of many important factors that need to be considered by all educators.

Citizenship behaviour is a range of actions made by individuals, organisms, systems, or artificial entities in conjunction with themselves or their environment, which includes the other systems or organisms around as well as the physical environment. Citizenship behaviour has three characteristics; First characteristic was the ability to give

serious considerations about belief, policy and practice related to various social and environmental issues that happen around them. The second one is the sense responsibility as a citizen of the world. Which means that every single aspects of his or her actions will give impact to people who live in other part of the world [17]. Furthermore, internal factors and external factors play important roles in developing pro environmental behaviour. External factors consist of personality and value system that own by a person. For external variables, it consists of politics infrastructure, social and culture, and economic situations. If educators managed to synergize these internal and external factors then it will give very positive influenced to pro environmental behaviour[13]

In terms of citizenship behaviour, in 1987 Hines, et all published their ten years research on meta-analysis of environmental behaviour. The goals was to identify the accurate variables to assess environmental responsibility performance. Based on one hundred and twenty eight research, they concluded that there are factors affected people behaviour, namely situational factors and intention to act. Intention to act itself were also influenced by some factors like knowledge about environmental issues, knowledge about strategy to act, skills to do actions and personality factors. Furthermore, personality factors also influenced by attitude, locus of control and personal responsibility[8].

Based on Hines, et all research, Hungerford and Volk in 1990 developed a citizenship behaviour model. According to Hungerford and Volk, there are three variables group contributed to citizenship behaviour. The first one is entry-level variable, the second is ownership variable and the third is empowerment variables. Entry-level variable plays important role to help people make a strong decision. This variable consist of environmental sensitivity, the knowledge about ecology, androgyny, and attitude towards pollution, as well as technology and economics. Ownership variables is a special variable that make environmental issues become personal.

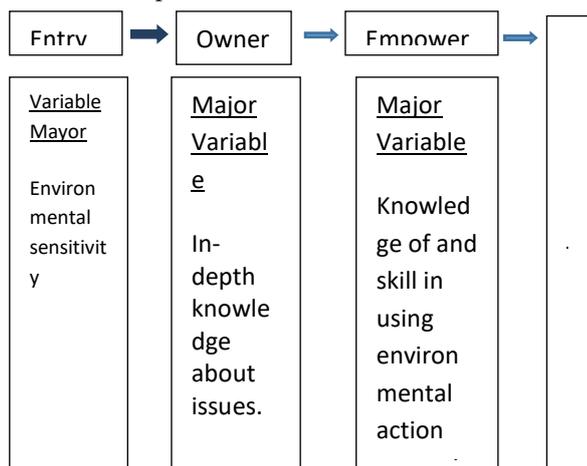


Figure 1. Citizenship behaviour model

This variable consist of some indicators, they are in-depth knowledge about issues, personal investment in issues and the environment, knowledge of consequences of behaviour (both positive and negative) and a personal commitment to issue resolutions. The third variable, which is empowerment variable, focus on encouraging people to do a change and involve in environmental problems. This variable consist of knowledge of and skills in using environmental actions strategy, locus of control, intention to act on environmental issues. This third variable is consider as the most important variables when we implement environmental education program[10]. Figure 1 below shows those three variables, groups and its major and minor variables. To ensure that our education program aims to develop citizenship behaviour, Hungerford and Volk recommended seven important aspects for teachers and educators to be considered, they are: (1) teaching ecology concept and its relationship to environment (2) providing opportunities, which carefully designed to help learner achieve environmental sensitivity, which in turn will encourage them to act responsibly. (3) Encouraging teaching and learning which produce in-depth knowledge about issue. (4) Teaching the skill to investigate and evaluate environmental issue and provide enough time for learners to apply the skills in the real situation. (5) Teaching learner the skills to design a solution and implement it. (6) Accommodating the learning process that help students to increase their hopes to be a responsible person and at the same time develop their locus of control. (7) Providing a scope and sequence to enable students to conduct a simple research on environmental issue and solving an environmental problem either in local, regional, national or even in international level.[15],[20] also second Hungerford and Volk opinion, in his view there were five variables to stimulate the development of environmental responsibility behaviour. Those variables are environmental sensitivity, knowledge on strategic possible that can be taken by a citizen, skills to implement strategic action, individual locus of control and the last one was group locus of control.

Intention to act is a feeling of ability to do a change action and give help in solving environmental related problem. Intention to act is part of activities conducted by a person[11]. In line with Hungerford and Volk, some research findings also stated that intention to act is a simple mental actions or power to make own decision. Intention to act is like an entry steps of action conducted by a person. In other words, intention is like a predictor of an action, and indicates someone readiness to do actions [5]. Individual aspects like personality (emotion and mood), values, attitude, together with social aspects (education background, age, gender, religion, ethnic, culture) and information (knowledge and media) are acknowledged as instrumental contributor to intention and then to behaviour.

We can easily understand someone behaviour by identifying source of his or her intention. One will show an intention if he/her has positive attitude toward particular behaviour.

However, the behaviour sometimes will not appear if the person is lack of ability to show his/her intentions. For

instance, the intention to watch musical performance, but failed due to the lack of budget or other possible obstacles. added that intention to act would turn into actions if the opportunity to do it were widely open. In education context, students' action could be implemented by providing them opportunity to participate in environmental actions, developing service-learning platform that enable students to raise concern and develop program on how to preserve endangered species in their local area. Intention to act also depends on the background knowledge, investigations and evaluations skills [7][18]. In regards to intention to also developed three steps of dream model, which is explorations, inspirations and action.

Some recommended activities can be applied in many education program related to this dream model. For instance, assign students to make personal commitment to save the water, run zero waste program and ask them to sign a personal pledge or do campaign on the importance of reducing the use of plastic bag (Russ, 2014). Therefore it sounds to argue that a good environmental education program need to consider the balance between cognitive, affective and psychomotor domain of it process [1], especially affective domain [9]. Social network is also acknowledged as a good vehicle to strengthen intention to act [14].

Personal investment not always related to money. The amount of time spent to learn how to recycle paper, to watch an environmental hero movie or dedicated time per week to teach kids about environmental art are some example of personal investment in action. In Hungerford and Volk model of Citizenship Behaviour, personal investment will exist only if the person has shown his /her interest to particular issues. Therefore to ensure development of personal investment in particular environmental education program, one need to design a program that facilitate high order thinking skills, like investigating environmental issue or evaluating environmental problem. In implementing this concept, there are seven principles we need to apply, they are (1) applying knowledge and skills to investigate the issue. (2) Analysing the link between issue and values in regards to ecology and cultural aspects. (3) Identifying alternative solutions. (4) Performing an ability to evaluate alternative solutions and its values (5) Clarifying the position of personal values related to issue and its solutions. (6) Performing the competence to evaluate, clarify and change the values as consequences of the infusion of new information. (7) Performing the ability to analyse various sustainability related concept scenario that can be applied in its respective issue.

The fourth variable is personal commitment. Personal commitment is an obligation to voluntarily agree and decide to do action or to fulfil the target. Personal commitment is very personal in its nature. There are two types of commitment. The first one is verbal commitment and the second is actual commitment. Personal commitment can be identified by measuring student's intention to participate in pro environmental activities [16]. When choosing an activity, one generally consider three aspects, which are (1) the own well-being, (2) the goal of personal well-being and (3) personal goals preference. Commitment become stronger if there is an acknowledgement from community,

and to build a strong commitment, influencer is consider important. Eleven tactics consider effective to influence people to build their personal commitment in different situations. Those eleven tactics are (1) Rational persuasion, (2) Consultation, (3) Inspirations, (4) Collaborations, (5) Explanation, (6) Praising, (7) Exchanging, (8). Personal, (9) Legitimations, (10) Pressure and (11) Coalitions (Scharlatt and Smith, 2011).

II. MATERIALS AND METHODS

This study aimed to obtain information about the effect of personal commitment, personal investment and intention to act to citizenship behaviour of students. The survey method was used involving 170 students as a sample. There were four instruments used: citizenship behaviour (18 items, reliability .884), intention to act (20 items, reliability .909), personal investment (17 items, reliability .895), and personal commitment (12 items, reliability .776)

The descriptive and quantitative analysis method was applied in this research. The data was descriptively displayed in the form of frequency distribution and histogram while inferential statistics were used to test the hypothesis using path analysis technique. As an analytical prerequisite, normality tests were performed using the Liliefors formula, regression linearity test, and homogeneity test using the Bartlett test.

III. RESULTS

The result of path analysis was obtained as follows:

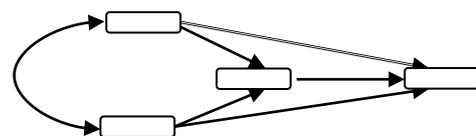
Path		Causal Effect				t-cal	t-tab $\alpha .05$	
		Direct Effect	Intervening					Indirect Effect
			X ₁	X ₂	X ₃			
X ₁ X ₄	P ₄₁	0.49	0.06	0.25	0.31	7.03*	1.97	
X ₂ X ₄	P ₄₂	0.18		0.27	0.27	2.57*	1.97	
X ₃ X ₁	P ₃₁	0.38				5.32*	1.97	
X ₃ X ₂	P ₃₂	0.41				5.80*	1.97	
X ₄ X ₃	P ₄₃	0.65				11.23*	1.97	

Table 1. The result of path analysis

* $p < .05$;

The causal effect between personal commitments (X₁), personal investments (X₂), intention to act (X₃) and citizenship behaviour (X₄) is shown on the figure below.

Figure 2. Causal Effect Between X₁, X₂, X₃, and X₄



The result of path analysis of sub structure I, obtained that path coefficient (p₄₁) equal to .491 with $t_{count} = 7.03 >$

$t_{table} (.05; 170) = 1.97$ which means that there was a direct effect between personal commitment to citizenship behaviour significantly. The next, path coefficient (p42) is .18 with $t_{count} = 2.57 < t_{table} (.05; 170) = 1.97$ which means there was a direct effect between personal investment to citizenship behaviour of students. The calculations of path analysis for sub structure II, the obtained result is path coefficient (p31) equal to .382 with $t_{count} = 5.32 < t_{table} (.05; 170) = 1.97$ which means there was a direct effect between personal commitment to intention to act. Path coefficient (p32) is .41 with $t_{count} = 5.80 < t_{table} (.05; 170) = 1.97$ which means there was a direct effect between personal investment to students' intention to act. The last one is the calculations of path analysis for sub structure III, the obtained result is path coefficient (p43) equal to .65 with $t_{count} = 11.23 < t_{table} (.05; 170) = 1.97$ which means there was a direct effect between intention to act to citizenship behaviour of students.

IV. DISCUSSION

The research result shows that the citizenship behaviour of students was directly affected by students' personal commitment. Citizenship behaviour also directly affected by students' personal investment and student's intention to act. Furthermore, students' personal commitment also give indirect effect to citizenship behaviour of students through students' intention to act. Personal investment also has indirect effect to students' citizenship behaviour through students' intention to act.

The result of this hypothesis testing take us to a conclusion that there is a direct positive effect of students' personal commitment on students' citizenship behaviour. The result of this study was in accordance with and Hungerford and Volk that ownership variable, like personal commitment to environmental issue resolution has a strong link to citizenship behaviour. This study also support as well as opinions about stimulating factors for environmental responsibility behaviour, which highlight the importance of sensitivity, knowledge and skills to implement strategic action and solve environmental problems as well as internal and external factors in each individual. Considering the importance of environmental education to solve various environmental problems, which also has strong link to economic and social problems, it sounds to argue that all environmental education program should enable learners to develop their ability to make a personal commitment. This findings also related to the concept of teaching and learning in 21st century proposed by and that learning process has strong influence in developing learners' knowledge, awareness and attitude[4],[6],[19]. Citizenship behaviour will develop if there is an opportunity to learn about issue from different perspective, facilitate learners to do investigations, and then actively participate in solving the problem. Therefore, it important for all educators to implement teaching and learning that allow learners to build their commitment and give positive contribution as a citizen of a nation and the world. Seven aspects suggested by Hungerford and Volk or variables to stimulate the development of environmental responsibility behaviour can be used as a reference to ensure that the environmental education program is in-line with its main goals. Give opportunities for students to do service learning, enable

them to design their own program to raise their peers on the importance of preserving the environment or actively participate in environmental actions run in their local area are some practical activities that can be develop by all educators .At the same time it will ensure that the program has a right balance between cognitive, affective and psychomotor domain in its process as stated. In the age of information and communication technology, then social network like facebook, Instagram, twitter which are fun and more familiar to young generations, it can be consider as an effective vehicle to involve students active participations in environmental campaign

Students' personal investment directly affect their citizenship behaviour. This finding also support Knap, Volk and Hungerford opinion about the needs to invest time, energy or even money if the interest about particular issue has been developed .Moreover, if personal investment has been developed and become personal needs, then citizenship behaviour will easily developed. In the light of teaching and learning in the 21st century, another key point to be highlight is the importance of opportunity for students to do some investment through their time, energy and money. With this in mind, some learning approach are considered effective to build students' personal investment. For instance, project based learning, problem based learning or service learning. When they learn about one particular environmental issue, at the same time they will build the sense of ownership of their learning process, which in turn will encourage them to also invest more time, energy and even money to participate in solving environmental problems as stated as well as Hungerford, et all. To motivate students to do some investments, then it is vital to work with community. Build partnership with Non-Government Organisation, civil society or government institution that have similar concern and focus program, have widely been proved in helping students get their access to various learning resources, activities and even seed fund to support the initiative.

Equally important is students' personal commitment, which also directly affect their intention to act. Intention to act will exist based on the ability to make a decision.

Personal commitment either a verbal commitment or action are actually a form of decision made by a person. This is related to the research findings conducted. Thus, it is vital to cultivate students' ability to make a commitment through their learning process, which enable them make their own commitment in various activities.

Similarly, students' personal investment also directly affect students' intention to act. As an illustration if students have committed to invest time, energy or money, they will put their effort to ensure that they will gain personal benefit or even benefit for other person. Once a person do investment to learn about waste recycle for instance, they will try to practice it and learn more about the challenge of doing it as well as its benefit. This is related to statements about the development of intention to act in the learning process[12].

Personal commitment also indirectly affect students' citizenship behaviour through students' intention to act.

This findings support the research conducted intention to act will be built depends on students ability to do investigations and evaluation of particular issue.

In addition, this research also found that personal investment affect students' citizenship behaviour through students' intention to act. Hence, it sounds to argue that when students start to make investment in terms of time, energy or money at the same time they actually build their intention to do actions, and later on, it will build their citizenship behaviour. For example, when students invest their time and energy to learn on how to save electricity and the lack of natural resources that produce electricity, then they will intent to save energy and then drive them to participate and do action to turn of the light and save energy in their daily life.

V. CONCLUSION

Based on those findings, it can be concluded that first, there was a direct positive effect of students' personal commitment on students' citizenship behavior. Second, there was a direct positive effect of personal investment on students' citizenship behavior. Third, there was a direct positive effect of students' intention to act on students' citizenship behavior. Fourth, there was an indirect effect of students' personal commitment on students' citizenship behavior through students' intention to act. Fifth, there was an indirect effect of students' personal investment on students' citizenship behavior through intention to act. Sixth, there was a direct effect of students' personal commitment on students' intention to act. The last one, seventh, there was a direct effect of students' personal investment on students' intention to act.

Citizenship behaviour will be improved or changed if the learning process emphasize on the process of building personal commitment coupled with personal investment and intention to act. These findings could also be revealed that any changing or variation occurred in student's citizenship behaviour might have been directly significant effected by student's personal commitment and student's personal investment and indirectly significant effected by intention to act. Hence, if we want to minimize the variation occurred in student's citizenship behaviour, factors such as students' personal commitment, personal investment, and intention to act are important to be taken into account.

ACKNOWLEDGEMENT

This research was supported by Indonesia Endowment Fund for Education

REFERENCES

1. Bergamn, Brenda Gail. (2016). Assessing Impacts of Locally Designed Environmental Education Projects on Students' Environmental Attitudes, Awareness, and Intention to Act. *Environmental Education Research*, 22(4):480-03
2. British Council Jakarta (2008). *Mapping Climate Education in Indonesia: Opportunities for Development*. British Council Indonesia: Jakarta.
3. Enc, Beren. (2003). *How We Act. How We Act. Causes, Reasons, and Intentions*. Clarendon Press: Oxford
4. Fayers, Christopher (1999). Environment and Investment: the role of personal investment choice in creating sustainability/ Sustainable development, 7 (2), 1999: 66.
5. Fishbein, Martin dan Ajzen, Icek. (2010). *Predicting and Changing Behavior. The Reason Action Approach*. Psychology press: New York
6. Fullan, Michael (2010) *The New Meaning of Educational Change*. Columbia: Teacher College Press: Columbia
7. Hadjichambis Andreas Ch. Paraskeva-Hadjichambi, Demetra, & Hara, Ioannou, , Georgiou Yiannis, Manoli, Constantinos C., (2015) *Integrating Sustainable Consumption into Environmental Education: A Case Study on Environmental Representations, Decision Making and Intention to Act*. *International Journal of Environmental & Science Education*, 10 (1):82
8. Hines, Jody M Hungerford Harold R. and Tomera. Audrey N (1987). *Analysis and Synthesis of Research on Responsible Environmental Behavior: A Meta-Analysis*. *Journal of Environmental Education*. 18(2):5 .
9. Huijts, N.M.A., De Groot, J.I.M., E.J.E. Molin dan van Wee. (2013) *Intention to act towards a local hydrogen refueling facility: Moral considerations versus self-interest*. *Transportation Research Part A* (48): 63-74.
10. Hungerford, Harold R dan Volk, Trudi L (1990). *Changing Learner Behaviour Through Environmental Education*. *Journal of Environmental Education*. 21 (3):22
11. Hungerford, Harold and Volk, Trudi (2003). *Notes from Harold Hungerford and Trudi Volk*. *Journal of Environmental Education*. 34 (2): 4-6
12. Knapp, Douglas, Volk, Trudi L., dan Hungerford, Harold. (1997). The Identification of Empirically Derived Goals for Program Development in Environmental Interpretation. *The Journal of Environmental Education*. 28(3):24-34.
13. Kollmuss, Anja dan Agyeman Julian. (2002). *Mind the Gap: why do people act environmentally and what are the barriers to pro-environmental behavior?*. *Environmental Education Research*, 8(3): 239-60.
14. Matook, Sabine, Brown Susan A., dan Rolf, Johanna. (2013). *Forming an Intention to Act on Recommendations given via Online Social Networks*. *European Journal of Information Systems*:1-7.
15. Marcinkowski, Tom, *Predictors of Responsible Environmental Behavior: A Review of Three Dissertation Studies*. In Hungerford, Bluhm, Volk and Ramsey (eds) (2005). *Essential Readings in Environmental Education*. Stipes Published L.L.C: Illinois.
16. Meuth, Amber M. 2010. *Environmental Literacy of Hispanic, Urban, Middle School Students in Houston, Texas*. Dissertation Faculty of the College of Education. University of Houston.
17. Micheletti, Michele, and Stolle, Dietlind. (2012). *Sustainable Citizenship and the New Politics of Consumption*, *The Annals of the American Academy of Political and Social Science*, ,Communication, Consumers, and Citizens: Revisiting the Politics of Consumption, 66:88-120
18. National Research Council (2002) *New Tools for Environmental Protection: Education, Information, and Voluntary Measures*. Committee on the Human Dimensions of Global Change. T. Dietz and P.C. Stern, eds. Division of Behavioral and Social Sciences and Education. National Academy Press: Washington DC.,
19. Palmer Joy and Neal. Philip (1994). *The Handbook of Environmental Education*. 1994. Routledge: London.
20. Wonnell, Teresa L. and Hill, Clara E. 2005 *Predictors of Intention to Act and Implementation of Action in Dream Sessions" Therapist Skills, Level of Difficulty of Action Plan, and Client Involvement*. *Dreaming*, 15(2):129-41