THE RELATIONSHIP BETWEEN ENVIRONMENTAL KNOWLEDGE, ENVIRONMENTAL ATTITUDE, PROACTIVE PERSONALITY AND GREEN BEHAVIOR AMONG UUM STUDENTS

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ABSTRACT

This study examines the factors that influence Green Behavior among UUM students in INASIS. The respondents of this study were undergraduate and postgraduate students who stay in INASIS Tradewinds, Proton and TNB, UUM. A total of 335 students were selected as respondents. The main purpose of this study is to examine the relationship between environmental knowledge, environmental attitude, proactive personality and green behavior among UUM students in INASIS. Researcher use Statistics Package for Social Science (SPSS) version 26 for analyses the data from the questionnaires. The results showed that there are positive relationships between the three factors and green behavior among UUM students in INASIS. The results of this study have shown that environmental attitude is the most important predictor followed by environmental knowledge, while proactive personality variable do not influence green behavior. Some suggestions can be made to enhance green behavior among UUM students in INASIS such as INASIS administrators need to provide recycle bins, diversify green activities in INASIS, provides a smoking ban, ban the provision of plastic straw in the cafe and conducting green awareness workshops.

Keywords: *green behavior, environmental knowledge, environmental attitude, proactive personality, INASIS, UUM*

ABSTRAK

Kajian ini meneliti faktor-faktor yang mempengaruhi Perilaku Hijau dalam kalangan pelajar UUM di INASIS. Responden kajian ini adalah pelajar sarjana muda dan pascasiswazah yang tinggal di INASIS Tradewinds, Proton dan TNB, UUM. Seramai 335 orang pelajar dipilih sebagai responden. Tujuan utama kajian ini adalah untuk mengkaji hubungan antara pengetahuan alam sekitar, sikap alam sekitar, personaliti proaktif dan kelakuan hijau dalam kalangan pelajar UUM di INASIS. Penyelidik menggunakan Pakej Perangkaan untuk Sains Sosial (SPSS) versi 26 untuk menganalisis data daripada soal selidik. Keputusan menunjukkan terdapat hubungan positif antara tiga faktor dan kelakuan hijau dalam kalangan pelajar UUM di INASIS. Hasil kajian ini menunjukkan bahawa sikap alam sekitar adalah peramal yang paling penting diikuti oleh pengetahuan alam sekitar, sementara pemboleh ubah personaliti proaktif tidak mempengaruhi tingkah laku hijau. Beberapa cadangan boleh dibuat untuk meningkatkan tingkah laku hijau dalam kalangan pelajar UUM di INASIS seperti pentadbir INASIS perlu menyediakan tong kitar semula, mempelbagaikan aktiviti hijau di INASIS, menyediakan larangan merokok, larangan penyediaan penyedut plastik di kafe dan menjalankan bengkel kesedaran hijau.

Kata Kunci: *perilaku hijau, pengetahuan alam sekitar, sikap alam sekitar, personaliti proaktif, INASIS, UUM*

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LIST OF ABBREVIATION

DV	Dependent Variable
IV	Independent Variable
PEB	Pro-environmental behaviour
UUM	Universiti Utara Malaysia
UI	University Indonesia
UN	United Nation
SDG	Sustainable Development Goals
INASIS	Student Residential Hall
GCCI	Program Greener, Cleaner & Campus Initiatives
OYA	Othman Yeop Abdullah
3Rs Section	Reduce, Reuse and Recycle
HEP	Student Affairs Department
SAC	Student Accommodation Center
HEA	Academic Affairs Department
TPB	Theory of Planned Behavioral
TRA	Theory of Reasoned Action
PBC	Perceived behaviour control
SPSS	Statistical Package Social Science
ANOVA	One-way analysis of variance
JKPS	Student Representative Committee

CHAPTER 1

INTRODUCTION

1.1 Introduction

Chapter 1 explains briefly the variables used in this study. Chapter 1 are consists of the background of the study, problem statement, research questions, research objectives and significance of the study. This study aimed to examine the relationship between three independent variables namely environmental knowledge, environmental attitude and proactive personality, with green behavior as a dependent variable.

1.2 Background of the Study

In recent decades, various environmental problems have become a threat to its sustainability of environmental, including urban of air pollution, global warming, shortage of water, environmental noise, and climate change (United Nations, 2019). Therefore, actions that can be taken to reduce the individual's impact on the environment are to understand the actions of the people such as recycling, waste management, water and energy use and other activities that can reduce the negative impact on the environment (Thondhlana and Hlatshwayo, 2018). In order to reduce behavior that impact to the environmental, green behavior has been promoted by various scholars in efforts to support environmental sustainability under different circumstances (Kollmuss and Agyeman, 2002; Steg and Vlek, 2009; Turaga, Howarth, and Borsuk, 2010; Revell, 2013; Thondhlana and Hlatshwayo, 2018).

REFERENCES

Abdollahzadehgan, A., Che Hussin, A. R., Gohary, M. M., & Amini, M. (2013). The Organizational Critical Success Factors for Adopting Cloud Computing in SMEs. *Journal of Information Systems Research and Innovation*, *4*(1), 67–74.

Abrahamse, W., Steg, L., Vlek, C., & Rothengatter, T. (2007). The effect of tailored information, goal setting, and tailored feedback on household energy use, energy-related behaviors, and behavioral antecedents. *Journal of Environmental Psychology*, *27*(4), 265–276. https://doi.org/10.1016/j.jenvp.2007.08.002

Ajzen, I. (1985). *From Intentions to Actions: A Theory of Planned Behavior* (pp. 11–39). pp. 11–39. Retrieved from https://link.springer.com/chapter/10.1007/978-3-642-69746-3_2

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Ajzen, I., & Fishbein, M. (2004). Questions raised by a reasoned action approach: Comment on Ogden (2003). *Health Psychology*, *23*(4), 431–434. https://doi.org/10.1037/0278-6133.23.4.431

Ajzen, I., & Manstead, A. S. R. (2007). Changing health-related behaviours: An approach based on the theory of planned behaviour. *The Scope of Social Psychology: Theory and Applications*, (June 2014), 43–64. https://doi.org/10.4324/9780203965245

Alshuwaikhat, H. (2008). Higher education for sustainable development An integrated approach to achieving c ampus sustainability: Assessment of the current campus environmental management practices. *Proceedings of the 4th International Barcelona Conference on Higher Education*, *7*(7).

Altinigne, N., & Bilgin, Z. (2015). The Effect of Environmental Attitudes on Environmentally Conscious Behavior of University Students. *145th International Marketing Trends Conference, Paris*, (January), 1–11. Retrieved from https://www.researchgate.net/publication/299556038_The_Effect_of_Environmental_Attitudes_on_Environmentally_Conscious_Behavior_of_University_Students

Amutenya, N., Shackleton, C. M., & Whittington-Jones, K. (2009). Paper recycling patterns and potential interventions in the education sector: A case study of paper streams at Rhodes University, South Africa. *Resources, Conservation and Recycling*, *53*(5), 237–242. https://doi.org/10.1016/j.resconrec.2008.12.001

Araghi, Y., Kroesen, M., Molin, E., & van Wee, B. (2014). Do social norms regarding carbon offsetting affect individual preferences towards this policy? Results from a stated choice experiment. *Transportation Research Part D: Transport and Environment*, *26*, 42–46. https://doi.org/10.1016/j.trd.2013.10.008

Asunta, T. (2003). Knowledge of Where Pupils Acquire Information Opinions , and Laboratory Behaviour Tuula Asunta Knowledge of Environmental Issues. In *Behaviour*.

Bakker, A. B., Tims, M., & Derks, D. (2012). Proactive personality and job performance: The role of job crafting and work engagement. *Human Relations*, *65*(10), 1359–1378. https://doi.org/10.1177/0018726712453471

Bandura, A. (1999). Social Cognitive Theory of Personality: Theory and research. *Handbook of Personality*, 154–196. https://doi.org/10.1016/0749-5978(91)90022-L

Barber, N., Taylor, C., & Strick, S. (2009). Wine consumers' environmental knowledge and attitudes: Influence on willingness to purchase. *International Journal of Wine Research*, *1*(1), 59–72. https://doi.org/10.2147/IJWR.S4649

Bartkus, K. R., Hartman, C. L., & Howell, R. D. (1999). The Measurement of Consumer Environmental Knowledge: Revisions and Extensions. *Journal of Social Behavior and Personality*, *14*(1), 129.

Bateman, T. S., & Crant, J. M. (1993). The proactive component of organizational behavior: A measure and correlates. *Journal of Organizational Behavior*, *14*(2), 103–118. https://doi.org/10.1002/job.4030140202

Bayaah, A. S. N., Juhdi, N., & Awadz, A. S. (2010). Examination of Environmental Knowledge and Perceived Pro-Environmental Behavior Among Students of University Tun Abdul Razak, Malaysia. *International Journal of Multidisciplinary Thought*, *1*(1), 328–342.

Beaumont, R. (2012). *An Introduction to Correlation* (pp. 1–28). pp. 1–28. Retrieved from http://www.robin-beaumont.co.uk/virtualclassroom/stats/course1.html

Bo, S., & Zi-Jing, Z. (2014). *Proactive Personality and Career Success: A Person-organization Fit Perspective*. (Emtc), 21–26. https://doi.org/10.2991/emtc-14.2014.4

Bowers., & S, K. (1973). Situationism in psychology: an analysis and a critique. *Psychological Bulletin*, *80*(5), 307–336. https://doi.org/10.1037/h0035592

Brick, C., & Lewis, G. J. (2014). Unearthing the "Green" Personality: Core Traits Predict Environmentally Friendly Behavior. *Environment and Behavior*, *48*(5), 635–658. https://doi.org/10.1177/0013916514554695

Brown, A., Bimrose, J., Barnes, S. A., & Hughes, D. (2012). The role of career adaptabilities for mid-career changers. *Journal of Vocational Behavior*, *80*(3), 754–761. https://doi.org/10.1016/j.jvb.2012.01.003

Brown, D. J., Cober, R. T., Kane, K., Levy, P. E., & Shalhoop, J. (2006). Proactive personality and the successful job search: A field investigation with college graduates. *Journal of Applied Psychology*, *91*(3), 717–726. https://doi.org/10.1037/0021-9010.91.3.717

Bulunga, A. A. L., & Thondhlana, G. (2018). Action for increasing energy-saving behaviour in student residences at Rhodes University, South Africa. *International Journal of Sustainability in Higher Education*, *19*(4), 773–789. https://doi.org/10.1108/IJSHE-07-2017-0107

Cavas, B., Ertepinar, H., & Teksoz, G. (2014). Sustainability in schools of education in Turkey: In the words of Lecturers. *Journal of Baltic Science Education*, *13*(4), 469–482. Retrieved from http://www.scientiasocialis.lt/jbse/files/pdf/vol13/469-

482.Cavas_JBSE_Vol.13_No.4.pdf

CBC News. (2019, April 2). It's official: Manitoba town gives plastic bags the boot - Manitoba - CBC News. *CBC News*. Retrieved from http://www.cbc.ca/news/canada/manitoba/it-s-official-manitoba-town-gives-plastic-bags-the-boot-1.657651

Chan, R. Y. K., & Lau, L. B. Y. (2000). Antecedents of green purchases: A survey in China. *Journal of Consumer Marketing*, *17*(4), 338–357. https://doi.org/10.1108/07363760010335358

Chelliah, S., Atteyat, B. M. A., & Huoy, L. M. (2017). Greener Campus Awareness among International Students for a better Sustainable Campus Culture. *International Journal of Managerial Studies and Research*, *5*(4), 42–53. https://doi.org/10.20431/2349-0349.0504008

Chen, F. Y. (2013). The intention and determining factors for airline passengers' participation in carbon offset schemes. *Journal of Air Transport Management*, *29*, 17–22. https://doi.org/10.1016/j.jairtraman.2013.01.001

Chern, L. T. (2018, November 7). No plastic at Penang airport _ The Star Online. *Thestar*. Retrieved from https://www.thestar.com.my/news/nation/2018/11/07/no-plastic-at-penang-airport/

Chin Ivy, T. G., Eng Lee, C. K., & Chuan, G. K. (1999). A survey of environmental knowledge, attitudes and behaviour of students in Singapore. *International Research in Geographical and Environmental Education*, *1*(3), 2–6. https://doi.org/10.1080/10382049808667574

Conner, M., & Abraham, C. (2001). Conscientiousness and the theory of planned behavior: Toward a more complete model of the antecedents of intentions and behavior. *Personality and Social Psychology Bulletin*, *27*(11), 1547–1561. https://doi.org/10.1177/01461672012711014

Cortese, A. D. (2003). Planning for Higher Education The Critical Role of Higher Education in Creating a Sustainable Future Need for a New Human Perspective Envisioning a Sustainable Future. *Planning for Higher Education*, 15–22.

Costa, P. T., & McCrae, R. R. (2008). The revised NEO personality inventory (NEO-PI-R). In *The SAGE Handbook of Personality Theory and Assessment: Volume 2 - Personality Measurement and Testing*. https://doi.org/10.4135/9781849200479.n9

Curran-Everett, D. (2009). Explorations in statistics: The bootstrap. *American Journal of Physiology - Advances in Physiology Education*, *33*(4), 286–292. https://doi.org/10.1152/advan.00062.2009

Cushman-roisin, B. (2011). *Green behaviour (homo ecologicus)* (pp. 1–16). pp. 1–16. Retrieved from http://www.dartmouth.edu/~cushman/courses/IE-at-UNG/GreenBehavior.pdf

Dahle, M., & Neumayer, E. (2001). Overcoming barriers to campus greening: A survey among higher educational institutions in London, UK. *International Journal of Sustainability in Higher Education*, *2*(2), 139–160.

https://doi.org/10.1108/14676370110388363

Davison, L., Littleford, C., & Ryley, T. (2014). Air travel attitudes and behaviours: The development of environment-based segments. *Journal of Air Transport Management*, *36*, 13–22. https://doi.org/10.1016/j.jairtraman.2013.12.007

de Leeuw, A., Valois, P., Ajzen, I., & Schmidt, P. (2015). Using the theory of planned behavior to identify key beliefs underlying pro-environmental behavior in high-school students: Implications for educational interventions. *Journal of Environmental Psychology*, *42*, 128–138. https://doi.org/10.1016/j.jenvp.2015.03.005

De Young, R. (2000). New Ways to Promote Proenvironmental Behavior: Expanding and Evaluating Motives for Environmentally Responsible Behavior. *Journal of Social Issues*, *56*(3), 509–526. https://doi.org/10.1111/0022-4537.00181

Debora Indriani, I. A., Rahayu, M., & Hadiwidjojo, D. (2019). The Influence of Environmental Knowledge on Green Purchase Intention the Role of Attitude as Mediating Variable. *International Journal of Multicultural and Multireligious Understanding*, *6*(2), 627. https://doi.org/10.18415/ijmmu.v6i2.706

Enfield, M., & Mathew, E. (2012). Storybook Science: How a picture book brought the concept of change of position to life. *Science and Children*, *50*, 46–49.

Erdogan, M., Ok, A., & Marcinkowski, T. J. (2012). Development and validation of Children's Responsible Environmental Behavior Scale. *Environmental Education Research*, *18*(4), 507–540. https://doi.org/10.1080/13504622.2011.627421

Espinosa, R. M., Turpin, S., Polanco, G., De laTorre, A., Delfín, I., & Raygoza, I. (2008). Integral urban solid waste management program in a Mexican university. *Waste Management*, *28*(SUPPL. 1). https://doi.org/10.1016/j.wasman.2008.03.023

European Commission. (2013). Waste Prevention Guidelines. *Environment*. Retrieved from http://ec.europa.eu/environment/waste/prevention/guidelines.htm

Faber, J., & Linda, B. (2011). Inclusion of aviation in the EU Emissions Trading System. In *International Centre for Trade and Sustainable Development (ICTSD)*. Retrieved from https://www.ictsd.org/sites/default/files/research/2011/11/the-inclusion-of-aviation-in-the-eu-emissions-trading-system.pdf

Fuller, B., & Marler, L. E. (2009). Change driven by nature: A meta-analytic review of the proactive personality literature. *Journal of Vocational Behavior*, *75*(3), 329–345. https://doi.org/10.1016/j.jvb.2009.05.008

Green Campus. (2007). Green Campus Initiative. *Directorate of Technical Education Madhya Pradesh*, pp. 1–5. Retrieved from http://www.greening.uct.ac.za/gci/who/

Green, T. L. (2013). Teaching (un)sustainability? University sustainability commitments and student experiences of introductory economics. *Ecological Economics*, *94*, 135–142. https://doi.org/10.1016/j.ecolecon.2013.08.003

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial Least Squares Structural

Equation Modeling: Rigorous Applications, Better Results and Higher Acceptance. *Long Range Planning*, *46*(1–2), 1–12. https://doi.org/10.1016/j.lrp.2013.01.001

Hassan, M. H., Hosseinpou, M., Nezakati, H., & Jofreh, M. (2015). Highlighting Influential Factor to Inculcate Green Behaviour. *Journal of Applied Sciences*, *15*(3), 405–410. https://doi.org/10.3923/jas.2015.405.410

Hill, R. J., Fishbein, M., & Ajzen, I. (1977). Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research. *Contemporary Sociology*, *6*(2), 244. https://doi.org/10.2307/2065853

Hines, J. M., Hungerford, H. R., & Tomera, A. N. (1987). Analysis and synthesis of research on responsible environmental behavior: A meta-analysis. *Journal of Environmental Education*, *18*(2), 1–8. https://doi.org/10.1080/00958964.1987.9943482

Hoch, S. J., & Deighton, J. (1989). Managing What Consumers Learn from Experience. *Journal of Marketing*, *53*(2), 1. https://doi.org/10.2307/1251410

Hornung, S., Rousseau, D. M., & Glaser, J. (2008). Creating Flexible Work Arrangements Through Idiosyncratic Deals. *Journal of Applied Psychology*, *93*(3), 655–664. https://doi.org/10.1037/0021-9010.93.3.655

Józsa, K., & Morgan, G. A. (2017). Reversed items in likert scales: Filtering out invalid responders. *Journal of Psychological and Educational Research*, *25*(1), 7–25.

Kanfer, R. (1990). Motivation theory and industrial and organizational psychology. In *Handbook of industrial and organizational psychology*. https://doi.org/10.1111/j.1754-9434.2008.volcontents_1.x

Kearney, A. R., & de Young, R. (1995). A Knowledge-Based Intervention for Promoting Carpooling. *Environment and Behavior*, *27*(5), 650–678. https://doi.org/10.1177/0013916595275003

Kim, Y., Yun, S., & Lee, J. (2014). Can companies induce sustainable consumption? The impact of knowledge and social embeddedness on airline sustainability programs in the U.S. *Sustainability (Switzerland)*, *6*(6), 3338–3356. https://doi.org/10.3390/su6063338

Ko, D. G., & Dennis, A. R. (2011). Profiting from knowledge management: The impact of time and experience. *Information Systems Research*, *22*(1), 134–152. https://doi.org/10.1287/isre.1090.0247

Koellner, E. C., & Tovar, L. A. R. (2009). Study of Green Behavior with a Focus on Mexican Individuals. *IBusiness*, *01*(02), 124–131. https://doi.org/10.4236/ib.2009.12016

Koger, S. M., & Winter, D. D. (2009). *The Psychology of Environmental Problems: Psychology for Sustainability 3rd Edition*. Retrieved from https://www.amazon.com/Psychology-Environmental-Problems-Sustainability/dp/1848728093

Kollmuss, A., & Agyeman, J. (2002). Mind the Gap: Why Do People Act Environmentally and What Are the Barriers to Pro-Environmental Behavior?

Prentice-Hall, Inc, *40*(2), 239–260. https://doi.org/10.1080/1350462022014540

Laroche, M., Bergeron, J., & Barbaro-Forleo, G. (2001). Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of Consumer Marketing*, *18*(6), 503–520. https://doi.org/10.1108/EUM0000000006155

Leal Filho, W., Shiel, C., do Paço, A., & Brandli, L. (2015). Putting sustainable development in practice: Campus greening as a tool for institutional sustainability efforts. In *Sustainability in Higher Education*. https://doi.org/10.1016/B978-0-08-100367-1.00001-9

Lee, K. (2008). Opportunities for green marketing: Young consumers. *Marketing Intelligence and Planning*, *26*(6), 573–586. https://doi.org/10.1108/02634500810902839

Lee, K. (2010). The Green Purchase Behavior of Hong Kong Young Consumers: The Role of Peer Influence, Local Environmental Involvement, and Concrete Environmental Knowledge. *Journal of International Consumer Marketing*, *23*(1), 21–44. https://doi.org/https://doi.org/10.1080/08961530.2011.524575

Lee, T. H., Jan, F. H., & Yang, C. C. (2013). Conceptualizing and measuring environmentally responsible behaviors from the perspective of community-based tourists. *Tourism Management*, *36*, 454–468. https://doi.org/10.1016/j.tourman.2012.09.012

Li, N., Liang, J., & Crant, J. M. (2010). The Role of Proactive Personality in Job Satisfaction and Organizational Citizenship Behavior: A Relational Perspective. *Journal of Applied Psychology*, *95*(2), 395–404. https://doi.org/10.1037/a0018079

Linden, S. Van Der. (2014). Towards a new model for communicating climate change. In P. P. and S. G. S. Cohen, J. Higham (Ed.), *Governance and policies based upon psychological, behavioural and social mechanisms* (pp. 243–275). Retrieved from https://www.researchgate.net/publication/285850993_Towards_a_new_model_for_communicating_climate_change

Liobikiene, G., & Poškus, M. S. (2019). The importance of environmental knowledge for private and public sphere pro-environmental behavior: Modifying the Value-Belief-Norm theory. *Sustainability (Switzerland)*, *11*(12), 2–19. https://doi.org/10.3390/su10023324

Llie, M. P., & Cazan, A. M. (2018). Personality correlates of pro-environmental attitudes. *Journal International Journal of Environmental Health Research*, *28*(1), 71–78. https://doi.org/https://doi.org/10.1080/09603123.2018.1429576

Lozano, R., Lukman, R., Lozano, F. J., Huisingh, D., & Lambrechts, W. (2013). Declarations for sustainability in higher education: Becoming better leaders, through addressing the university system. *Journal of Cleaner Production*, *48*, 10–19. https://doi.org/10.1016/j.jclepro.2011.10.006

Lynn, P. (2014). Distinguishing Dimensions of Pro-environmental Behaviour. *Institute for Social & Economic Research*. Retrieved from https://www.econstor.eu/bitstream/10419/123804/1/784977437.pdf

Manaktola, K., & Jauhari, V. (2007). Exploring consumer attitude and behaviour towards green practices in the lodging industry in India. *International Journal of Contemporary Hospitality Management*, *19*(5), 364–377. https://doi.org/10.1108/09596110710757534

Mantzicopoulos, P., & Patrick, H. (2011). Reading picture books and learning science: Engaging young children with informational text. *Theory into Practice*, *50*(4), 269–276. https://doi.org/10.1080/00405841.2011.607372

March, S. C. (1993). Development of conceptual knowledge and attitudes about energy and the environment. *International Journal of Science Education*, *15*(5), 553–565. https://doi.org/10.1080/0950069930150508

McCarty, J. A., & Shrum, L. J. (2016). The Recycling of Solid Wastes : Personal Values , as Antecedents of Recycling Behavior. *Journal of Business Research*, *30*(May 1994), 53–62. https://doi.org/10.1016/0148-2963(94)90068-X

McCormick, B. W., Guay, R. P., Colbert, A. E., & Stewart, G. L. (2019). Proactive personality and proactive behaviour: Perspectives on person–situation interactions. *Journal of Occupational and Organizational Psychology*, *92*(1), 30–51. https://doi.org/10.1111/joop.12234

Mei, N. S., Wai, C. W., & Ahamad, R. (2016). Environmental Awareness and Behaviour Index for Malaysia. *Procedia - Social and Behavioral Sciences*, *222*(07), 668–675. https://doi.org/10.1016/j.sbspro.2016.05.223

Meinhold, J. L., & Malkus, A. J. (2005). Adolescent Environmental BehaviorsCan Knowledge, Attitudes, and Self-Efficacy Make a Difference? *Environment and Behavior*, *37*(4), 511–532. https://doi.org/10.1177/0013916504269665

Michael, N., & Tom, H. (2010). Exploring the social dynamics of proenvironmental behavior change. *Journal of Industrial Ecology*, *14*(1), 137–149.

Milfont, T. L., & Duckitt, J. (2010). The environmental attitudes inventory: A valid and reliable measure to assess the structure of environmental attitudes. *Journal of Environmental Psychology*, *30*(1), 80–94. https://doi.org/10.1016/j.jenvp.2009.09.001

Mitchener, C. P., & Jackson, W. M. (2012). Learning from Action Research About Science Teacher Preparation. *Journal of Science Teacher Education*, *23*(1), 45–64. https://doi.org/10.1007/s10972-011-9261-0

Mohiuddin, M., Al Mamun, A., Syed, F. A., Masud, M. M., & Su, Z. (2018). Environmental knowledge, awareness, and business school students' intentions to purchase green vehicles in emerging countries. *Sustainability (Switzerland)*, *10*(5). https://doi.org/10.3390/su10051534

Mojilis, F. (2019). Sustainability awareness of students from a green university in Sabah, Malaysia. *Journal of Tourism, Hospitality and Environment Management*, *4*(13), 24–33.

Mun, C. C. (2009). a Study on Consumers ' Green Purchasing Intention 2009 (UUM). Retrieved from http://etd.uum.edu.my/1778/2/1.Cheah_Ching_Mun.pdf

Murphy, T. P. (2004). Minnesota Report Card on Environmental Literacy. *Minnesota Office Environmental Assistance*, pp. 1–83. Retrieved from

https://www.pca.state.mn.us/sites/default/files/p-ee5-07.pdf

NCSS. (2010). *Circular Data Analysis* (pp. 1–28). pp. 1–28. https://doi.org/10.1038/npp.2010.217

Niklas, H., & Sverker, C. J. (2018). Why do people accept environmental policies? The prospects of higher education and changes in norms, beliefs and policy preferences. *Journal of Environmental Education Research*, *24*(6), 791–806. https://doi.org/https://doi.org/10.1080/13504622.2017.1343281

Nunnally. (1978). *Nunnally on reliability*. Retrieved from https://www.scirp.org/(S(i43dyn45teexjx455qlt3d2q))/reference/ReferencesPapers.aspx?ReferenceID=1960143

Ojedokun, O. (2011). Attitude towards littering as a mediator of the relationship between personality attributes and responsible environmental behavior. *Waste Management*, *31*(12), 2601–2611. https://doi.org/10.1016/j.wasman.2011.08.014

Othman, M. N. (2004). Environmental Attitudes and Knowledge of Teenage Consumers. *Malaysian Journal of Consumer and Family Economics*, *7*(1).

Otto, S., & Kaiser, F. G. (2014). Ecological behavior across the lifespan: Why environmentalism increases as people grow older. *Journal of Environmental Psychology*, *40*, 331–338. https://doi.org/10.1016/j.jenvp.2014.08.004

OYAGSB. (2015). *Othman yeop abdullah graduate school of business*. Retrieved from http://www.oyagsb.uum.edu.my/images/Sustainability_Initiative_/sustainability-report.pdf

Paço, A., & Lavrador, T. (2017). Environmental knowledge and attitudes and behaviours towards energy consumption. *Journal of Environmental Management*, *197*, 384–392. https://doi.org/10.1016/j.jenvman.2017.03.100

Parece, T. E., Grossman, L., & Geller, E. S. (2013). Reducing Carbon Footprint of Water Consumption: A Case Study of Water Conservation at a University Campus. In *Climate Change and Water Resources*. https://doi.org/10.1007/698

Parker, S. K., & Collins, C. G. (2010). Taking stock: Integrating and differentiating multiple proactive behaviors. *Journal of Management*, *36*(3), 633–662. https://doi.org/10.1177/0149206308321554

Petersen, N. (2018). Personality Linked to Pro-Environmental Behaviors _ AllPsych Blog. Retrieved October 15, 2019, from allpsych website: https://blog.allpsych.com/personality-linked-to-pro-environmental-behaviors/

Phanny, I. (2014). *Guideline for interpreting correlation coefficient*. Retrieved from https://www.slideshare.net/phannithrupp/guideline-for-interpreting-correlation-coefficient

Polonsky, M. J., Vocino, A., Grau, S. L., Garma, R., & Ferdous, A. S. (2012). The impact of general and carbon-related environmental knowledge on attitudes and behaviour of US consumers. *Journal of Marketing Management*, *28*(3–4), 238–263. https://doi.org/10.1080/0267257X.2012.659279

Rashid, N. R. N. A. (2009). Awareness of Eco-label in Malaysia's Green Marketing

Initiative. *International Journal of Business and Management*, *4*(8), 132–141. https://doi.org/10.5539/ijbm.v4n8p132

Raymond, C. M., Fazey, I., Reed, M. S., Stringer, L. C., Robinson, G. M., & Evely, A. C. (2010). Integrating local and scientific knowledge for environmental management. *Journal of Environmental Management*, *91*(8), 1766–1777. https://doi.org/10.1016/j.jenvman.2010.03.023

Revell, K. (2013). Promoting sustainability and pro-environmental behaviour through local government programmes: examples from London, UK. *Journal of Integrative Environmental Sciences*, *10*(3–4), 199–218. https://doi.org/10.1080/1943815X.2013.858752

Rezai, G., Teng, P. K., Mohamed, Z., & Shamsudin, M. N. (2013). Is it easy to go green? Consumer perception and green concept. *American Journal of Applied Sciences*, *10*(8), 793–800. https://doi.org/10.3844/ajassp.2013.793.800

Rimbahijau. (2019). RimbaHijau - Student Activity. Retrieved October 24, 2019, from UUM website: http://www.rimbahijau.uum.edu.my/index.php/education/student-activity

Rivera-Torres, P., & Garcés-Ayerbe, C. (2018). Development of pro-environmental conduct in individuals and its determinants. *Revista Espanola de Investigaciones Sociologicas*, *163*(April), 59–78. https://doi.org/10.5477/cis/reis.163.59

Robertson, J. L., & Barling, J. (2013). Greening organizations through leaders' influence on employees' pro-environmental behaviors. *Journal of Organizational Behavior*, *34*(2), 176–194. https://doi.org/10.1002/job.1820

Rodríguez-Barreiro, L. M., Fernández-Manzanal, R., Serra, L. M., Carrasquer, J., Murillo, M. B., Morales, M. J., … Del Valle, J. (2013). Approach to a causal model between attitudes and environmental behaviour. A graduate case study. *Journal of Cleaner Production*, *48*, 116–125. https://doi.org/10.1016/j.jclepro.2012.09.029

Runkawatt, V., Kerdchuen, K., Tipkanjanaraykha, K., Ubolwan, K., Tawetanawanich, Y., Nasirin, C., & Win, M. L. (2016). Kogan ' s Attitude Toward Old People : Evaluation of validity and reliability assessment among nursing students. *Asian Journal for Public Opinion Research*, *3*(3), 145–155. https://doi.org/http://dx.doi.org/10.15206/ajpor.2016.3.3. 145

Sac. (2010). Universiti Utara Malaysia Universiti Utara Malaysia. Retrieved October 20, 2019, from Inasis, UUM website: http://www.uum.edu.my/inasis.html

Saladié, Ò., & Santos-Lacueva, R. (2016). The role of awareness campaigns in the improvement of separate collection rates of municipal waste among university students: A Causal Chain Approach. *Waste Management*, *48*, 48–55. https://doi.org/10.1016/j.wasman.2015.11.037

Savelyeva, T., & Park, J. (2003). Complexity of Campus Sustainability Discourse. In Leal (Ed.), *Environmental Education, Communication and Sustainability*. https://doi.org/10.1590/S0100-15742003000100008

Schahn, J., & Holzer, E. (1990). Studies of Individual Environmental Concern: The Role of Knowledge, Gender, and Background Variables. *Journal of Environment*

and Behavior, *22*(6), 767–786.

Schultz, P. W., & Tabanico, J. (2007). Self, Identity, and the Natural Environment: Exploring Implicit Connections With Nature (English). *Journal of Applied Social Psychology*, *37*(6), 1219–1247. https://doi.org/10.1111/j.1559-1816.2007.00210.x

Schwartz, S. H. (1970). Elicitation of moral obligation and self-sacrificing behavior: An experimental study of volunteering to be a bone marrow donor. *Journal of Personality and Social Psychology*, *15*(4), 283–293. https://doi.org/10.1037/h0029614

Sekaran, U. (2002). *Research Methods for Business: A Skill Building Approach (4th Edition)* (4th ed.). Retrieved from https://www.amazon.com/Research-Methods-Business-Building-Approach/dp/0471203661

Sekaran, U., & Bougie, R. (2010). *Research Methods for Business: A Skill Building Approach 5th Edition* (5th ed.). Retrieved from https://www.amazon.com/Research-Methods-Business-Building-Approach/dp/0470744790

Sekaran, U., & Bougie, R. (2013). *Research Methods for Business: A Skill-Building Approach 6th Edition* (6th ed.). Retrieved from https://www.amazon.com/Research-Methods-Business-Skill-Building-Approach/dp/111994225X

Shabnam, S. (2013). Proposed Model for Predicting Environmental Purchase Behavior of Consumers. *European Academic Research*, *I*(4), 444–466.

Sharp, L. (2010). Higher education: The quest for the sustainable campus. *TMS Annual Meeting*, *5*(1), 739–750. https://doi.org/10.1080/15487733.2009.11908023

Simmons, D., & Widmar, R. (1990). Motivations and Barriers to Recycling: Toward a Strategy for Public Education. *Journal of Environmental Education*, *22*(1), 13–18. https://doi.org/https://doi.org/10.1080/00958964.1990.9943041

Steg, L., & Vlek, C. (2007). Human Behavior and Environmental Sustainability : Problems , Driving Forces , and Research Topics Problems , Driving Forces , and Research Topics. *Journal of Social Issues*, *63*(August 2015), 1–19. https://doi.org/10.1111/j.1540-4560.2007.00493.x

Steg, L., & Vlek, C. (2009). Encouraging pro-environmental behaviour: An integrative review and research agenda. *Journal of Environmental Psychology*, *29*(3), 309–317. https://doi.org/10.1016/j.jenvp.2008.10.004

Stern, P. C. (2000). New Environmental Theories: Toward a Coherent Theory of Environmentally Significant Behavior. *Journal of Social Issues*, *56*(3), 407–424. https://doi.org/10.1111/0022-4537.00175

Stern, P. C. (2011). Contributions of Psychology to Limiting Climate Change. *American Psychologist*, *66*(4), 303–314. https://doi.org/10.1037/a0023235

Stokes, L. C., Mildenberger, M., Savan, B., & Kolenda, B. (2012). Analyzing Barriers to Energy Conservation in Residences and Offices: The Rewire Program at the University of Toronto. *Applied Environmental Education and Communication*, *11*(2), 88–98. https://doi.org/10.1080/1533015X.2012.751282

Sultan, N. (2013). Knowledge management in the age of cloud computing and Web 2.0: Experiencing the power of disruptive innovations. *International Journal of Information Management*, *33*(1), 160–165. https://doi.org/10.1016/j.ijinfomgt.2012.08.006

Suwartha, N., & Sari, R. F. (2013). Evaluating UI GreenMetric as a tool to support green universities development: Assessment of the year 2011 ranking. *Journal of Cleaner Production*, *61*, 46–53. https://doi.org/10.1016/j.jclepro.2013.02.034

Thondhlana, G., & Hlatshwayo, T. N. (2018). Pro-environmental behaviour in student residences at Rhodes University, South Africa. *Sustainability (Switzerland)*, *10*(8), 1–19. https://doi.org/10.3390/su10082746

Tiyarattanachai, R., & Hollmann, N. M. (2016). Green Campus initiative and its impacts on quality of life of stakeholders in Green and Non-Green Campus universities. *SpringerPlus*, *5*(1), 1–17. https://doi.org/10.1186/s40064-016-1697-4

Tolentino, L. R., Garcia, P. R. J. M., Lu, V. N., Restubog, S. L. D., Bordia, P., & Plewa, C. (2014). Career adaptation: The relation of adaptability to goal orientation, proactive personality, and career optimism. *Journal of Vocational Behavior*, *84*(1), 39–48. https://doi.org/10.1016/j.jvb.2013.11.004

Trumper, R. (2010). How do learners in developed and developing countries relate to environmental issues? *Science Education International*, *21*(4), 217–240.

Turaga, R. M. R., Howarth, R. B., & Borsuk, M. E. (2010). Pro-environmental behavior: Rational choice meets moral motivation. *Annals of the New York Academy of Sciences*, *1185*, 211–224. https://doi.org/10.1111/j.1749-6632.2009.05163.x

Turner, J. E. (2005). Proactive personality and the Big Five as predictors of motivation to learn. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, *65*(9-B), 4884. https://doi.org/10.25777/e50x-k845

United Nations. (2019). The United Nations Conference on Environment and Development Rio de Janerio, Brazil, 3 to 14 June 1992, Agenda 21. *Journal of Architectural Education*, *46*(3), 197–198. https://doi.org/10.1080/10464883.1993.10734558

Universitas Indonesia. (2017). UI GreenMetric World University Rankings Guideline 2017. Retrieved from Universitas Indonesia website: http://greenmetric.ui.ac.id/

UUM. (2018). UUM Soars Seven Rungs Up The UI Greenmetric World University Rankings 2018. Retrieved from Uum website: http://www.uum.edu.my/news-feed/456-uum-soars-seven-rungs-up-the-ui-greenmetric-world-university-rankings-2018.html

Uumnewsfeed. (2019). Universiti Utara Malaysia - UUM Is The Choice Of Institution Of Higher Education For 4,856 New Students Admitted For The 2019_2020 Academic Session. Retrieved October 5, 2019, from UUM website: http://www.uum.edu.my/uum-news-feed/647-uum-is-the-choice-of-institution-of-higher-education-for-4-856-new-students-admitted-for-the-2019-2020-academic-session.html

van Birgelen, M., Semeijn, J., & Behrens, P. (2011). Explaining pro-environment consumer behavior in air travel. *Journal of Air Transport Management*, *17*(2), 125–128. https://doi.org/10.1016/j.jairtraman.2010.12.013

Van der Heijden, B. I. J. M., de Lange, A. H., Demerouti, E., & Van der Heijde, C. M. (2009). Age effects on the employability-career success relationship. *Journal of Vocational Behavior*, *74*(2), 156–164. https://doi.org/10.1016/j.jvb.2008.12.009

Van Riper, C. J., & Kyle, G. T. (2014). Understanding the internal processes of behavioral engagement in a national park: A latent variable path analysis of the value-belief-norm theory. *Journal of Environmental Psychology*, *38*, 288–297. https://doi.org/10.1016/j.jenvp.2014.03.002

Vlahakis, G. N., Skordoulis, K., & Tampakis, K. (2014). Introduction: Science and Literature Special Isssue. *Science and Education*, *23*(3), 521–526. https://doi.org/10.1007/s11191-013-9601-x

Wah, L. T. (2016). Methodology and Promotion of Green Behavior Among Students in Malaysia. *International Journal of Economics, Commerce and Management*, *IV*(7), 573–583.

Watt, S. E., Maio, G. R., & Haddock, G. (2011). Attitude functions in persuasion: Matching, involvement, self-affirmation, and hierarchy. In *Taylor and Francis Ltd 5* (Vol. 9780203838068). https://doi.org/10.4324/9780203838068

Whitehair, K. J., Shanklin, C. W., & Brannon, L. A. (2013). Written Messages Improve Edible Food Waste Behaviors in a University Dining Facility. *Journal of the Academy of Nutrition and Dietetics*, *113*(1), 63–69. https://doi.org/10.1016/j.jand.2012.09.015

Whitlock, M. C., & Schluter, D. (2008). *The Analysis of Biological Data First Edition, 1st Edition* (1st ed.). Retrieved from https://www.amazon.com/Analysis-Biological-Data-Michael-Whitlock/dp/0981519407

Wood, S. (2012). Prone to Progress: Using Personality to Identify Supporters of Innovative Social Entrepreneurship. *Journal of Public Policy & Marketing*, *31*(1), 129–141. https://doi.org/10.2307/41714261

Yu, T. Y., & Yu, T. K. (2017). The moderating effects of students' personality traits on pro-environmental behavioral intentions in response to climate change. *International Journal of Environmental Research and Public Health*, *14*(12), 1–20. https://doi.org/10.3390/ijerph14121472

Yutao Wang, Han Shi, Mingxing Sun, Donald Huisingh, Lars Hansson, R. W. (2013). Moving towards an ecologically sound society? Starting from green universities and environmental higher education. *Journal of Cleaner Production*, *61*, 1–5. Retrieved from https://www.sciencedirect.com/science/article/pii/S0959652613006501

Zelezny, L. C., & Schultz, P. W. (2000). Promoting Environmentalism. *Journal of Social Issues*, *56*(3), 365–371. https://doi.org/10.1111/0022-4537.00172

Ziegler, A., Schwarzkopf, J., & Hoffmann, V. H. (2012). Stated versus revealed knowledge: Determinants of offsetting CO2 emissions from fuel consumption in vehicle use. *Energy Policy*, *40*, 422–431.

https://doi.org/10.1016/j.enpol.2011.10.027

Zikmund, W. G. (2002). *Business Research Methods, 7th Edition* (7th ed.). Retrieved from https://www.amazon.com/Business-Research-Methods-William-Zikmund/dp/0030350840

Zsóka, Á., Szerényi, Z. M., Széchy, A., & Kocsis, T. (2013). Greening due to environmental education? Environmental knowledge, attitudes, consumer behavior and everyday pro-environmental activities of Hungarian high school and university students. *Journal of Cleaner Production*, *48*, 126–138. https://doi.org/10.1016/j.jclepro.2012.11.030

APPENDICES

Appendix A: Questionnaire

THE RELATIONSHIP BETWEEN ENVIRONMENTAL KNOWLEDGE, ENVIRONMENTAL ATTITUDE, PROACTIVE PERSONALITY AND GREEN BEHAVIOR AMONG UUM STUDENTS IN INASIS

Dear: Respondents,

This survey is to examine the "The relationship between environmental knowledge, environmental attitude, proactive personality and green behavior among UUM students in INASIS". This survey is pre-requirements which are compulsory to be carried out by every candidate who is pursuing a Master of Science Management (MSc).

I would appreciate if you could answer the questions honestly because the information you provide will influence the accuracy and success of this research. It will take less than 20 minutes to answer this questionnaire. All information given is **CONFIDENTIAL**. The data collected will be used only **FOR ACADEMIC** purposes.

Thank you for your time, cooperation and attention. If you have any other questions or concerns, please feel free to contact me at 013-4513985 or email at nur13wahyuni@gmail.com.

Your cooperation is greatly appreciated.

Yours sincerely,

……

Nur Wahyuni Binti Md Hamry

Master of Science Management (MSc)

School of Business Management

SECTION 1: DEMOGRAPHIC CHARATERISTICS

Please TICK (√) at the appropriate responses for question 1-6 below:

1. Gender

   ☐ Male ☐ Female

2. Age (Please state)

   ☐ 18-20

   ☐ 21-23

   ☐ 24-26

   ☐ 27-29

   ☐ Above 29

3. Race

   ☐ Malay ☐ Chinese

   ☐ Indian ☐ Others: Please specify……

4. Marital Status

   ☐ Single ☐ Married

5. INASIS

   ☐ Tradewinds ☐ Proton

   ☐ TNB

6. Highest academic qualification

   ☐ STPM

   ☐ Matriculation

   ☐ Diploma

   ☐ Degree

   ☐ Master

   ☐ Others: Please specify……..

SECTION 2: GREEN BEHAVIOR

Please **CIRCLE** only **ONE** answer which is appropriate for each statement below:

1	2	3	4
Never	**Rarely**	**Sometimes**	**Always**

Energy saving					
1.	Do you turn off the lights when you leave your room?	1	2	3	4
2.	Do you turn off the lights when you go to bed?	1	2	3	4
3.	Do you turn off the lights when you are the last person to leave the common room?	1	2	3	4
4.	Do you turn off the TV when you are the last person to leave the common room?	1	2	3	4
5.	Do you make full use of daylight during the daytime? (i.e., Open your curtains)	1	2	3	4
6.	Do you make use of your side lamp for activities requiring a small amount of focus light?	1	2	3	4
7.	Do you unplug your charges or devices when not in use?	1	2	3	4
8.	Do you turn off your computer or laptop if not in use for more than 30 min?	1	2	3	4
9.	Do you only boil the amount of water you need?	1	2	3	4
10.	Do you keep windows and doors closed when the fan is switched on?	1	2	3	4
Water saving					
11.	Do you use a toothbrush cup?	1	2	3	4
12.	Do you turn off the tap when washing your face or brushing your teeth?	1	2	3	4
13.	Do you take short showers?	1	2	3	4
14.	Do you cut down on the frequency of washing clothes?	1	2	3	4
Waste management:					
15.	Do you follow garbage rules in residences (waste separation in your residence: Plastic, Paper and General Waste)?	1	2	3	4
16.	Do you print back to back?	1	2	3	4
17.	Do you use your own bag when going for shopping?	1	2	3	4

SECTION 3: ENVIRONMENTAL KNOWLEDGE

Please **CIRCLE** only **ONE** answer which is appropriate for each statement below:

1	2	3	4	5
Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**

Statement						
1.	All living things is important in maintaining balance in ecology.	1	2	3	4	5
2.	Natural resources "**should be preserved"** for future generation.	1	2	3	4	5
3.	The condition of our environment can affect our health.	1	2	3	4	5
4.	**"Destruction"** of forests will cause biological imbalances.	1	2	3	4	5
5.	A country will never run short of its natural resources.	1	2	3	4	5
6.	Main cause of air pollution in Malaysia is fumes/smoke from vehicles.	1	2	3	4	5
7.	Most rivers in Malaysia are polluted.	1	2	3	4	5
8.	Our country is faced with serious solid waste (garbage) and landfill problems.	1	2	3	4	5
9.	Alternative energy, e.g. solar energy can be utilized to replace electricity.	1	2	3	4	5
10.	The "**natural environment"** should be "**forgot",** in the name of development.	1	2	3	4	5
11.	Usage of "**disposable goods"** should be encouraged, as it provides convenience to consumers.	1	2	3	4	5
12.	**"Unleaded petrol"** is better than **"leaded petrol",** as it is less harmful to the environment.	1	2	3	4	5
13.	Using public transport can help reduce air pollution.	1	2	3	4	5
14.	**"Vehicles improperly"** maintained will cause pollution.	1	2	3	4	5

SECTION 4: ENVIRONMENTAL ATTITUDE

Please **CIRCLE** only **ONE** answer which is appropriate for each statement below:

	Statement					
1.	I have to save water at INASIS to take care of the environment.	1	2	3	4	5
2.	I must use public transportation to help the environment.	1	2	3	4	5
3.	I must save electricity in my INASIS to contribute to the improvement of the environment.	1	2	3	4	5
4.	How to disposal or recycling are should always be implemented in INASIS.	1	2	3	4	5
5.	The durability of a product reduces its environmental impact, even if it is more expensive.	1	2	3	4	5

SECTION 5: PROACTIVE PERSONALITY

Please **CIRCLE** only **ONE** answer which is appropriate for each statement below:

	Statement					
1.	I am constantly on the lookout for new ways to improve my life.	1	2	3	4	5
2.	Wherever I have been, I have been a powerful force for constructive change.	1	2	3	4	5
3.	Nothing is more exciting than seeing my ideas turn into reality.	1	2	3	4	5
4.	If I see something I don't like, I fix it.	1	2	3	4	5
5.	No matter what the odds, if I believe in something I will make it happen.	1	2	3	4	5
6.	I love being a champion for my ideas, even against others' opposition.	1	2	3	4	5
7.	I excel at identifying opportunities.	1	2	3	4	5
8.	I am always looking for better ways to do things.	1	2	3	4	5
9.	If I believe in an idea, no obstacle will prevent me from making it happen.	1	2	3	4	5
10.	I can spot a good opportunity long before others can.	1	2	3	4	5

Thank you very much for your time and cooperation.

Appendix B: Number of UUM programs and number of student participation in 2017, 2018 and 2019

Tahun	**2017**
Bilangan Program	314
Bilangan Penyertaan	32791

Tahun	**2018**
Bilangan Program	314
Bilangan Penyertaan	54514

Tahun	**2019**
Bilangan Program	314
Bilangan Penyertaan	22567

Appendix C: Number of Green program and number of student participation in INASIS at three consecutive semesters (A182, A183, A191)

	A182		A183		A191	
INASIS	**Bilangan Program**	**Bilangan Penyertaan**	**Bilangan Program**	**Bilangan Penyertaan**	**Bilangan Program**	**Bilangan Penyertaan**
Petronas	1	138	1	112		
TM	1	36	1	36	1	36
SD	1	48				
Muamalat	3	438				
MAS	1	37	2	159		
TNB	1	62	1	37		
Grantt	2	64	4	125		
SME	1	21	1	5		
BSN	2	206	1	39		
BR	2	333				
YAB			2	87		
Tradewinds						
Proton						
Jumlah	**15**	**1383**	**13**	**600**	**1**	**36**

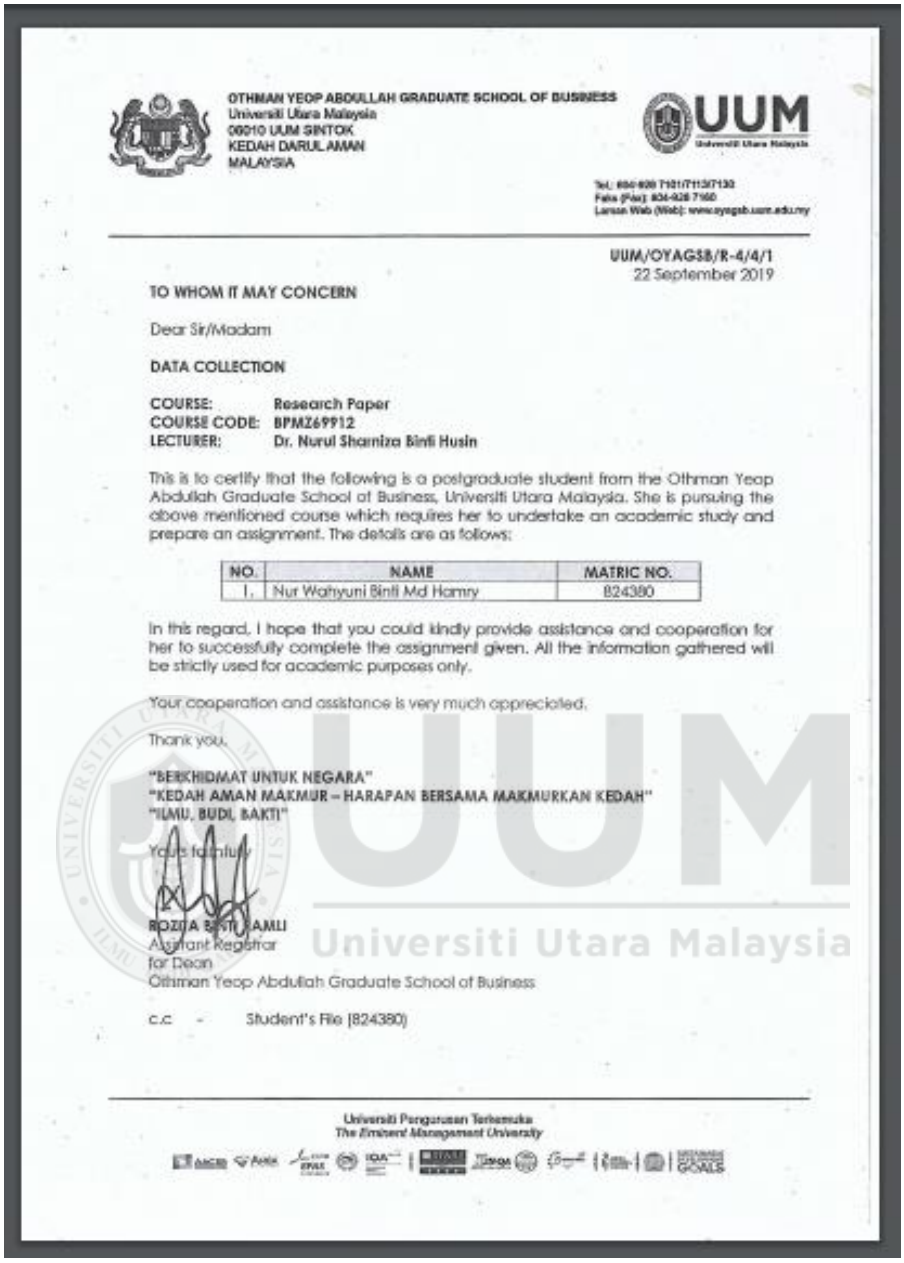
Appendix D: UUM Student Enrolment by Inasis, Degree of Study and Gender

Inasis	**Degree of Study/ Gender**		**Degree of Study/ Gender**		**Grand Total**
Student	**Postgraduate**		**Undergraduate**		
	Male	**Female**	**Male**	**Female**	
Inasis Proton	-	-	240	744	**984**
Inasis TNB	-	-	184	625	**809**
Inasis Tradewinds	85	109	323	322	**839**
Grand Total	**85**	**109**	**747**	**1691**	**2632**

Appendix E: Number of accommodation by gender and Inasis

Inasis	Number of Accommodation by Gender		Total
	Male	Female	
Proton	2	6	**8**
TNB	1	4	**5**
Tradewinds	2	2	**4**

Appendix F: Letter of Data Collection



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UUM/OYAGSB/R-4/4/1
22 September 2019

TO WHOM IT MAY CONCERN

Dear Sir/Madam

DATA COLLECTION

COURSE: Research Paper
COURSE CODE: BPMZ69912
LECTURER: Dr. Nurul Shaniza Binti Husin

This is to certify that the following is a postgraduate student from the Othman Yeop Abdullah Graduate School of Business, Universiti Utara Malaysia. She is pursuing the above mentioned course which requires her to undertake an academic study and prepare an assignment. The details are as follows:

NO.	NAME	MATRIC NO.
1.	Nur Wahyuni Binti Md Hamry	824380

In this regard, I hope that you could kindly provide assistance and cooperation for her to successfully complete the assignment given. All the information gathered will be strictly used for academic purposes only.

Your cooperation and assistance is very much appreciated.

Thank you.

"BERKHIDMAT UNTUK NEGARA"
"KEDAH AMAN MAKMUR – HARAPAN BERSAMA MAKMURKAN KEDAH"
"ILMU, BUDI, BAKTI"

Yours faithfully

ROZITA BINTI JAMLI
Assistant Registrar
for Dean
Othman Yeop Abdullah Graduate School of Business

c.c - Student's File (824380)

Universiti Pengurusan Terkemuka
The Eminent Management University

Appendix G: Pilot Test (Reliability Analysis)

1. Environmental Knowledge (Independent Variable)

Case Processing Summary

		N	%
Cases	Valid	40	100.0
	Excluded[a]	0	.0
	Total	40	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.638	14

Item Statistics

	Mean	Std. Deviation	N
EK1	4.63	.667	40
EK2	4.72	.506	40
EK3	4.68	.526	40
EK4	4.58	.549	40
EK5_r	3.08	1.347	40
EK6	4.10	.709	40
EK7	3.95	.749	40
EK8	4.08	.859	40
EK9	4.43	.675	40
EK10_r	3.60	1.317	40
EK11_r	2.08	.859	40
EK12	3.98	.862	40
EK13	4.47	.554	40
EK14	3.98	.974	40

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EK1	51.70	19.805	.643	.570
EK2	51.60	21.836	.419	.609
EK3	51.65	21.259	.523	.597
EK4	51.75	21.218	.504	.597
EK5_r	53.25	21.423	.067	.678
EK6	52.23	23.410	.023	.652
EK7	52.38	21.881	.232	.625
EK8	52.25	19.474	.509	.578
EK9	51.90	20.503	.509	.588
EK10_r	52.73	17.384	.451	.579
EK11_r	54.25	25.731	-.275	.701
EK12	52.35	21.054	.288	.616
EK13	51.85	21.618	.417	.607
EK14	52.35	22.079	.114	.648

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
56.33	24.071	4.906	14

2. Environmental Attitude (Independent Variable)

Case Processing Summary

		N	%
Cases	Valid	40	100.0
	Excluded[a]	0	.0
	Total	40	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.869	5

Item Statistics

	Mean	Std. Deviation	N
EA1	4.08	.917	40
EA2	4.08	.944	40
EA3	4.30	.791	40
EA4	4.40	.709	40
EA5	4.22	.733	40

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EA1	17.00	6.769	.742	.830
EA2	17.00	6.615	.750	.828
EA3	16.78	7.102	.811	.813
EA4	16.68	8.174	.610	.861
EA5	16.85	8.182	.579	.867

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
21.08	11.148	3.339	5

3. Proactive Personality (Independent Variable)

Case Processing Summary

		N	%
Cases	Valid	40	100.0
	Excluded[a]	0	.0
	Total	40	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.782	10

Item Statistics

	Mean	Std. Deviation	N
PP1	4.38	.628	40
PP2	3.83	.781	40
PP3	4.50	.641	40
PP4	4.05	.815	40
PP5	4.00	.679	40
PP6	3.78	.832	40
PP7	3.83	.903	40
PP8	4.25	.809	40
PP9	3.75	.899	40
PP10	3.73	.877	40

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PP1	35.70	19.138	.303	.779
PP2	36.25	18.808	.263	.786
PP3	35.57	19.584	.213	.788
PP4	36.03	16.487	.612	.742
PP5	36.07	17.661	.539	.755
PP6	36.30	16.318	.624	.740
PP7	36.25	16.038	.601	.742
PP8	35.82	16.661	.588	.745
PP9	36.32	17.866	.332	.781
PP10	36.35	17.310	.428	.767

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
40.07	21.199	4.604	10

Appendix H: Descriptive Analysis

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	59	17.6	17.6	17.6
	Female	276	82.4	82.4	100.0
	Total	335	100.0	100.0	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-20	124	37.0	37.0	37.0
	21-23	145	43.3	43.3	80.3
	24-26	27	8.1	8.1	88.4
	27-29	15	4.5	4.5	92.8
	Above 29	24	7.2	7.2	100.0
	Total	335	100.0	100.0	

Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Malay	201	60.0	60.0	60.0
	Indian	7	2.1	2.1	62.1
	Chinese	86	25.7	25.7	87.8
	Others	41	12.2	12.2	100.0
	Total	335	100.0	100.0	

Marital

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	320	95.5	95.5	95.5
	Married	15	4.5	4.5	100.0
	Total	335	100.0	100.0	

INASIS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Tradewinds	104	31.0	31.0	31.0
	TNB	160	47.8	47.8	78.8
	Proton	71	21.2	21.2	100.0
	Total	335	100.0	100.0	

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STPM	108	32.2	32.2	32.2
	Matriculation	17	5.1	5.1	37.3
	Diploma	5	1.5	1.5	38.8
	Degree	96	28.7	28.7	67.5
	Master	43	12.8	12.8	80.3
	Others	66	19.7	19.7	100.0
	Total	335	100.0	100.0	

Appendix I: Reliability Analysis

1. Environmental Knowledge (Independent Variable)

Case Processing Summary

		N	%
Cases	Valid	335	100.0
	Excluded[a]	0	.0
	Total	335	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.709	14

Item Statistics

	Mean	Std. Deviation	N
EK1	4.57	.634	335
EK2	4.53	.665	335
EK3	4.64	.598	335
EK4	4.50	.709	335
EK5_r	3.42	1.257	335
EK6	3.88	.814	335
EK7	3.85	.875	335
EK8	4.07	.792	335
EK9	4.26	.782	335
EK10_r	3.87	1.144	335
EK11_r	3.02	1.319	335
EK12	3.74	.831	335
EK13	4.37	.786	335
EK14	3.97	.824	335

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EK1	52.11	28.035	.547	.674
EK2	52.16	28.281	.479	.680
EK3	52.04	28.381	.529	.678
EK4	52.19	27.636	.533	.672
EK5_r	53.26	29.061	.108	.733
EK6	52.80	28.819	.301	.695
EK7	52.83	29.030	.245	.702
EK8	52.61	28.298	.378	.687
EK9	52.42	26.999	.553	.667
EK10_r	52.81	26.301	.384	.685
EK11_r	53.66	28.297	.148	.729
EK12	52.94	29.296	.236	.703
EK13	52.31	28.676	.335	.692
EK14	52.71	29.196	.251	.701

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
56.68	32.110	5.667	14

2. Environmental Attitude (Independent Variable)

Case Processing Summary

		N	%
Cases	Valid	335	100.0
	Excluded[a]	0	.0
	Total	335	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.818	5

Item Statistics

	Mean	Std. Deviation	N
EA1	4.18	.824	335
EA2	4.16	.844	335
EA3	4.29	.786	335
EA4	4.21	.785	335
EA5	3.96	.777	335

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EA1	16.62	6.051	.647	.771
EA2	16.64	6.112	.605	.784
EA3	16.51	6.107	.675	.763
EA4	16.58	6.226	.640	.774
EA5	16.83	6.782	.485	.817

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
20.79	9.350	3.058	5

3. Proactive Personality (Independent Variable)

Case Processing Summary

		N	%
Cases	Valid	335	100.0
	Excluded[a]	0	.0
	Total	335	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.783	10

Item Statistics

	Mean	Std. Deviation	N
PP1	4.22	.705	335
PP2	3.83	.750	335
PP3	4.39	1.737	335
PP4	3.88	.862	335
PP5	3.94	.831	335
PP6	3.60	.932	335
PP7	3.77	.802	335
PP8	4.16	.730	335
PP9	3.81	.832	335
PP10	3.74	.846	335

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PP1	35.12	26.525	.462	.766
PP2	35.52	25.364	.589	.752
PP3	34.96	24.672	.156	.854
PP4	35.47	24.932	.546	.754
PP5	35.40	24.684	.605	.748
PP6	35.74	24.850	.501	.759
PP7	35.57	24.593	.646	.744
PP8	35.18	25.974	.520	.760
PP9	35.53	24.962	.568	.752
PP10	35.61	25.413	.498	.760

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
39.34	30.376	5.511	10

4. Green Behavior (Dependent Variable)

Case Processing Summary

		N	%
Cases	Valid	335	100.0
	Excluded[a]	0	.0
	Total	335	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.673	17

Item Statistics

	Mean	Std. Deviation	N
GB1	3.72	.542	335
GB2	3.65	.705	335
GB3	3.73	.541	335
GB4	3.72	.657	335
GB5	3.14	.839	335
GB6	3.14	.815	335
GB7	3.14	.950	335
GB8	3.13	.849	335
GB9	3.10	.988	335
GB10	3.25	.825	335
GB11	1.98	1.172	335
GB12	3.17	.865	335
GB13	2.94	.835	335
GB14	2.98	.795	335
GB15	2.79	1.040	335
GB16	3.11	.837	335
GB17	2.43	.963	335

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
GB1	49.41	31.386	.322	.658
GB2	49.47	31.364	.225	.664
GB3	49.39	31.766	.258	.663
GB4	49.41	31.302	.259	.661
GB5	49.98	30.476	.265	.660
GB6	49.99	31.170	.198	.668
GB7	49.98	29.961	.267	.660
GB8	49.99	30.102	.302	.656
GB9	50.02	29.490	.295	.656
GB10	49.87	31.108	.200	.667
GB11	51.14	28.836	.272	.662
GB12	49.95	29.785	.328	.652
GB13	50.18	30.335	.283	.658
GB14	50.14	30.087	.335	.652
GB15	50.33	28.743	.342	.649
GB16	50.01	31.206	.185	.669
GB17	50.70	29.727	.284	.658

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
53.12	33.635	5.800	17

Appendix J: Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
TEK	335	3	5	3.96	.409
TEA	335	1	5	4.16	.612
TPP	335	2	7	3.93	.551
TGB	335	1	4	3.12	.341
Valid N (listwise)	335				

Appendix K: Correlation Analysis

Correlations

		TEK	TEA	TPP	TGB
TEK	Pearson Correlation	1	.512**	.541**	.295**
	Sig. (2-tailed)		.000	.000	.000
	N	335	335	335	335
TEA	Pearson Correlation	.512**	1	.584**	.326**
	Sig. (2-tailed)	.000		.000	.000
	N	335	335	335	335
TPP	Pearson Correlation	.541**	.584**	1	.290**
	Sig. (2-tailed)	.000	.000		.000
	N	335	335	335	335
TGB	Pearson Correlation	.295**	.326**	.290**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	335	335	335	335

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix L: Multiple Regression Analysis

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	TPP, TEK, TEA[b]	.	Enter

a. Dependent Variable: TGB

b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.367[a]	.134	.127	.319

a. Predictors: (Constant), TPP, TEK, TEA

b. Dependent Variable: TGB

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.225	3	1.742	17.132	.000[b]
	Residual	33.647	331	.102		
	Total	38.872	334			

a. Dependent Variable: TGB

b. Predictors: (Constant), TPP, TEK, TEA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.962	.176		11.149	.000
	TEK	.118	.053	.141	2.227	.027
	TEA	.109	.037	.196	2.981	.003
	TPP	.061	.042	.099	1.473	.142

a. Dependent Variable: TGB

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.58	3.41	3.12	.125	335
Residual	-1.576	.816	.000	.317	335
Std. Predicted Value	-4.325	2.283	.000	1.000	335
Std. Residual	-4.942	2.558	.000	.995	335

a. Dependent Variable: TGB