International Journal of Psychosocial Rehabilitation, Vol.24, Issue 09, 2020
ISSN: 1475-7192

Awareness Level on Sustainable Development Practices Among Postgraduate Students in Upsi, Perak

Mohd Hairy Ibrahim[1*], Mohd Hashiq Hashim[1] Raman a/l Mariyappan[2], Mazlan Ismail[2]
Balbir Singh Mahinder Singh[3], Muttamah Sathivelu[4] & Krishnan[5]

Abstract: *Sustainable practices in campus development plan are crucial especially in preserving the environment in all universities. This study aims to identify the level of awareness of postgraduate students in Universiti Pendidikan Sultan Idris (UPSI). The data is collected using qualitative method by using questionnaire which distributed to 351 random postgraduate students in UPSI. The level of awareness is measured from the aspect of knowledge, perception, comfort, realization, and appreciation in campus sustainable development practices. The results showed that perception and comfort aspects showed high level (M = 4.03, SP = 0.59) and (M = 4.13, SP = 0.53) respectively, while knowledge, realization, and appreciation aspects showed moderate level (M = 3.45, SP = 0.81), (M = 3.65, SP = 0.66), and (M = 3.41, SP = 0.89) respectively. This finding explains postgraduate students have moderate level of knowledge about sustainable development practices that are crucial in understanding sustainability. All universities should empower and implement sustainable development practices in campus to increase all of the student knowledge especially in sustainability.*

Keywords: *sustainable practices, environment, awareness, sustainability.*

I. INTRODUCTION

This globalization, world economic development is becoming sophisticated in line with the modern technology in fulfilling of human comfort. However, modern development flows have resulted in the deterioration of the quality of the environment through environmental pollution, especially from the exploitation of natural resources. Sustainable development is an ongoing effort to maintain the well-being of the environment surrounded by a group of people who strive to ensure the physical environment in good condition and able to meet the needs of life (Siti Khatijah & Christopher, 2016). It is undeniable that every institution should practice sustainable development to achieve environmental sustainability and sustainable economic development.

Sustainable development practice exists after environmental issues arise. Omar (2005) stated that most economic growth only focuses on economic development without noticing the importance of the environment which can deteriorate the world ecosystem. Sustainability should be considered to minimize the negative impact on the environment and natural resources. It is aimed at enhancing human connection with nature also minimizing the impact of human activities through the World Commission on Environment and Development (WCED) (1987) approach. It is clearly seen that sustainable development practices should be implemented at the very beginning of development processes to preserve the environment, especially for future generations.

According to Castillo (2014), all universities must have consistent goals in line with their vision and mission, especially in sustainable development practice. Popescu (2019) also stated that sustainability practices should be implemented in teaching, learning and research processes in university. Economic development in the university is

[1] [1]Department of Geography & Environment, Faculty of Human Sciences, Universiti Pendidikan Sultan Idris, Tanjong Malim, Perak, Malaysia
*e-mail: hairy@fsk.upsi.edu.my
[2]Department Of Planning And Property Development, School Of Government
College Of Law, Government And International Studies, Universiti Utara Malaysia.
[3]Petronas Technology University, Tronoh, Perak, Malaysia
[4]Department of Kedah Education, Ministry of Education, Malaysia
[5]Nk Associates, Malaysia.

crucial but on the other hand, the environment should be preserved to conserve the nature. Therefore, the main objective of this study was to determine the awareness level of postgraduate students in Universiti Pendidikan Sultan Idris (UPSI) on sustainable development practices which currently being practiced on campus through knowledge, perception, comfort, realization and appreciation aspect.

II. METHOD

Validity and Reliability Test

A total of 30 postgraduate students picked randomly in order to conduct the pilot test. This test is to determine the validity and reliability score for the instrument using Cronbach's Alpha measurement. Reliability defined as the consistency of a measurement used in the instrument (Linn & Gronlund, 2000). DeVellis (2003) stated that Cronbach's Alpha score must be above 0.7 to consider as good inconsistency and correlated with each other. Based on the validity and reliability test that has been conducted, the Cronbach's Alpha score showed 0.882 which considered as good in terms of reliability and correlated to each other (Table 1).

Table 1. Cronbach's Alpha score

Cronbach's Alpha	Cronbach's Alpha based on standardized items	N of items
.882	.883	45

The total number of UPSI postgraduate students is 3832. A total of 351 respondents were randomly selected as the sample size based on the Krejcie and Morgan sample size determination table that listed the sample size corresponding to population size (Krejcie & Morgan, 1970). Descriptive statistics analysis were used to obtain frequency readings, percentages, mean scores, and standard deviations to assess postgraduate student awareness level on sustainable development practices in UPSI. Cut-off point by Landell (1997) were used to determine postgraduate student awareness level in sustainable development practices (Table 2).

Table 2. Cut-off point for each aspects

Mean scale	Level
1.00 – 2.33	Low
2.34 – 3.66	Moderate
3.67 – 5.00	High

III. RESULTS AND DISCUSSIONS

Demographic Data

According to the survey that conducted to 351 respondents, 255 are Malay (72.6%), 19 are Chinese (5.4%), 22 are Indian (6.3%) and 55 were categorized as others (15.7%). The religion of the respondents showed that 270 are Muslim (76.9%), 12 are Buddhist (3.4%), 17 are Hindu (14.2%) and 50 consists of other religions (14.2%). Age of the respondents showed that 255 in the age of 25 to 29 years old (72.6%), 42 in the age of 30 to 34 years old (12%), 27 in the age of 30 to 39 years old (7.7%), 17 in the age of 40 to 44 years old (4.8%) and 10 in the age of 45 years old and above (2.8%). The gender of the respondents (Figure 1) consists of 138 males (39.3%) and 213 females (60.7%). Apart of that, the education level of the respondents (Figure 1) is 104 doing masters by course work (29.6), 181 doing masters by thesis (51.6%), 8 doing doctorate by course work (2.3%) and 58 doing doctorate by thesis (16.5%).

Respondent employment (Figure 1) also showed 68 respondents are self-employed (19.4%), 77 are public servant (21.9%), 29 are in private sector (8.3%), 176 are unemployed (50.1%) and 1 was retired (0.3%). The gross income of the respondents (Figure 1) showed that 32 has gross income RM1000 and below (9%), 144 has gross income in the range of RM1001 to RM3000 (41%), 117 has gross income in the range of RM3001 to RM5000 (33%) and 58 has gross income in the range of RM5001 and above (17%). Other than that, most of the respondent is Malaysian, which has a total of 333 respondents (94.9%) while the rest is from Bangladesh, China, Indonesia, Korea, and Syria.

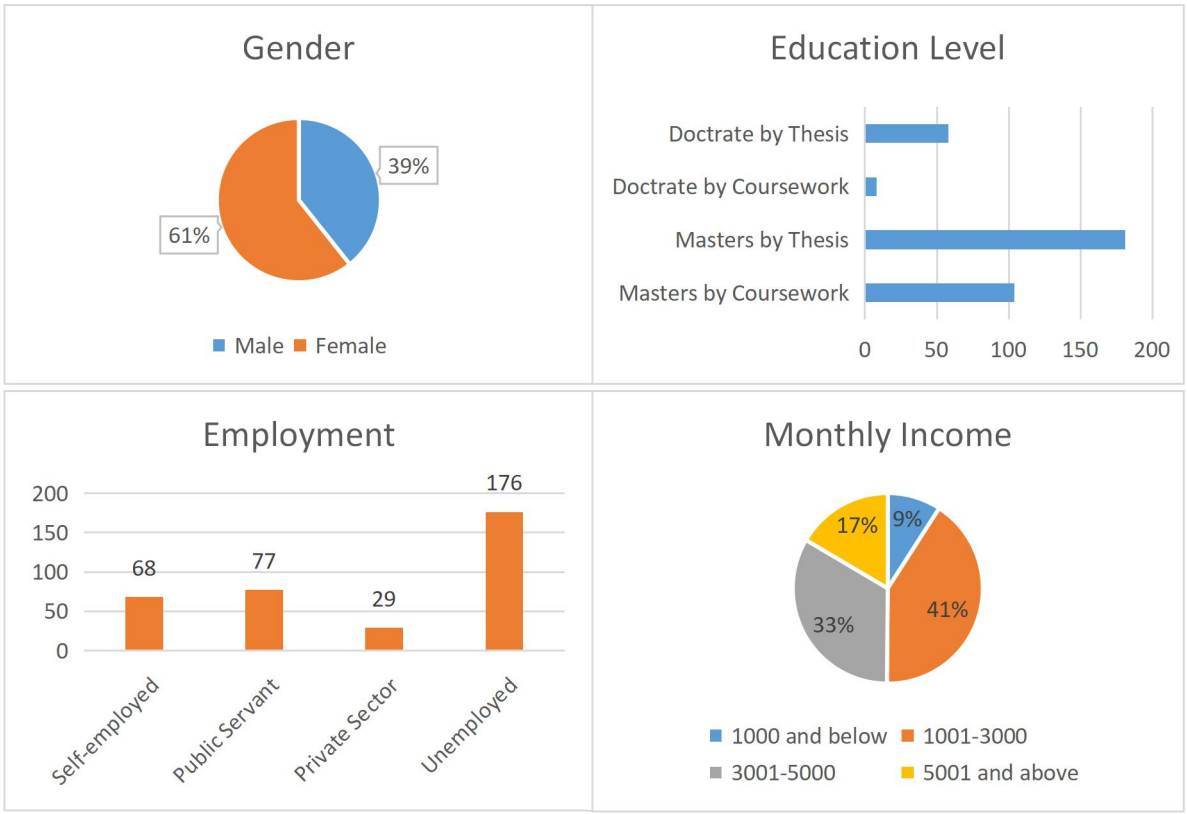

Figure 1. Respondent demographical data

Postgraduate Student Awareness Level in Sustainable Development Practices

Table 3 shows the results of frequency analysis, percentages, mean scores and standard deviation (SD) of respondent knowledge on UPSI sustainable development practices. The findings showed that 177 (50.4%) of respondents agreed and 89 (25.4%) of respondents were aware of the sustainability terms as stated in B1. The results also showed that 159 (43.3%) of the respondents agreed while 76 (21.7%) of the respondents strongly agreed on the importance of sustainable development practices in the university. Item B8 indicates that 138 (38.7%) of the average respondents agreed, 83 (23.6%) agreed and 37 (10.5%) strongly agreed that there was no forum on sustainable development practices at UPSI. Forum for sustainable development are crucial to develop awareness especially on environmental sustainability (Noranida & Khairulmani Osman, 2014).

Table 3. Respondent knowledge in campus sustainable development practices

Item	Question	Percent (%)					Mean	SD
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)		
B1	Are you aware of 'sustainability' term?	13 (3.7%)	22 (6.3%)	50 (14.2%)	177 (50.4%)	89 (25.4%)	3.87	0.98
B2	Are you aware of the Sustainable Development Goals (SDGs) signed by 193 World Leaders at UN in 2015?	23 (6.6%)	54 (15.4%)	75 (21.4%)	148 (42.2%)	51 (14.5%)	3.42	1.11
B3	Do SDGs are of immediate concern to you?	30 (8.5%)	36 (10.3%)	130 (37.0%)	104 (29.6%)	50 (14.2%)	3.30	1.10
B4	Do you take sustainability into consideration?	12 (3.4%)	43 (12.3%)	138 (39.3%)	107 (30.5%)	51 (14.5%)	3.40	0.99
B5	Do you know the properties of sustainable development practices used in university campus?	25 (7.1%)	62 (17.7%)	97 (27.6%)	143 (40.7%)	24 (6.8%)	3.22	1.04

B6	I realize the importance of sustainable development practices in university campus?	10 (2.8%)	34 (9.7%)	72 (20.5%)	159 (43.3%)	76 (21.7%)	3.73	0.99
B7	Not given opportunity to express opinion on sustainable development practices in university campus?	23 (6.6%)	57 (16.2%)	138 (39.3%)	108 (30.8%)	25 (7.1%)	3.15	0.99
B8	No forum on sustainable development practices in in university campus?	41 (11.7%)	54 (15.4%)	136 (38.7%)	83 (23.6%)	37 (10.5%)	3.05	1.13
B9	Does sustainable development matters to you?	9 (2.6%)	30 (8.5%)	71 (20.2%)	149 (42.5%)	92 (26.2%)	3.81	1.00
B10	Would you ever become an advocator of sustainable development?	15 (4.3%)	57 (16.2%)	101 (28.8%)	107 (30.5%)	71 (20.2%)	3.46	1.11
	Overall						3.45	0.81

Table 4 shows the results of frequency analysis, percentages, mean scores and standard deviation (SD) of respondent perception of sustainable development practices at UPSI. Item C1 shows that half of the respondents agreed and strongly agreed that housing equipped with green technology is expensive. A total of 145 (41.3%) respondents agreed and 74 (21.1%) strongly agreed that the relationship between house prices and sustainable development practices is unclear as stated in item C3. A total of 146 (41.6%) people agreed and 91 (25.9%) strongly agreed that the new housing features do not reflect sustainable development. According to Rosli et al. (2016), the aspect of sustainability is being neglected by housing developers.

Table 4. Respondent perception in campus sustainable development practices

Item	Question	Percent (%)					Mean	SD
		Strongly Disagree (1)	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly Agree (5)**		
C1	Houses with green development characteristics are expensive.	2 (0.6%)	29 (8.3%)	39 (11.1%)	139 (39.6%)	142 (40.5%)	4.11	0.94
C2	Urban houses are too costly.	-	11 (3.1%)	38 (10.8%)	118 (33.6%)	184 (52.4%)	4.35	0.79
C3	Relationship between prices and sustainable development practices are not clear.	3 (0.9%)	21 (6.0%)	108 (30.8%)	145 (41.3%)	74 (21.1%)	3.75	0.88
C4	I do not understand how sustainable practices in the housing industry influences economy.	7 (2.0%)	56 (16.0%)	106 (30.2%)	108 (30.8%)	74 (21.1%)	3.52	1.05
C5	Urban houses must be equipped with sustainable development characteristics.	2 (0.6%)	9 (2.6%)	37 (10.5%)	190 (54.1%)	113 (32.2%)	4.14	0.74
C6	Sustainable development practices must be reflected in the quality of houses.	2 (0.6%)	5 (1.4%)	53 (15.1%)	162 (46.2%)	129 (36.8%)	4.17	0.77
C7	Housing Board must control and determine the house prices.	2 (0.6%)	5 (1.4%)	38 (10.8%)	153 (43.6%)	153 (43.6%)	4.28	0.75
C8	I'm always concern about sustainable development characteristics and not the price	2 (1.4%)	25 (7.1%)	76 (21.7%)	125 (35.6%)	120 (34.2%)	3.94	0.98

	of the houses.							
C9	New designs of houses does not promote sustainable development characteristics.	2 (0.6%)	1 (5.4%)	93 (26.5%)	146 (41.6%)	91 (25.9%)	3.86	0.88
C10	Developers are much concern about profits than incorporating sustainable development practices in the housing industry.	2 (0.6%)	7 (2.0%)	48 (13.7%)	138 (39.3%)	156 (44.4%)	4.25	0.80
C11	Sustainable development is not a priority to the authorities in the housing industry.	5 (1.4%)	25 (7.1%)	75 (21.4%)	122 (34.8%)	124 (35.3%)	3.95	0.99
		Overall					4.03	0.59

Table 5 shows the level of comfort of the respondents towards sustainable development practices at UPSI. The findings showed that almost all respondents agreed that they prefer comfortable buildings and only 5 (1.4%) disagree. Item D3 also showed that 152 (43.3%) agreed and 163 (47.0%) respondents strongly agreed on the priority aspect of buildings that reflected sustainable development practices. Accordingly, 164 (46.7%) respondents agreed and 112 (31.9%) strongly agreed that buildings that practice sustainable development practices are more durable. Kasztelan (2017) argues that project managers must have knowledge of green technology in development that focuses on environmental sustainability in order for sustainable development as a continuous effort.

Table 5. Respondent comfort level in campus sustainable development practices

Item	**Question**	**Percent (%)**					**Mean**	**SD**
		Strongly Disagree (1)	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly Agree (5)**		
D1	I prefer building with designs which reflects very relaxed atmosphere.	-	5 (1.4%)	22 (6.3%)	140 (39.9%)	184 (52.4%)	4.43	0.67
D2	The build area of a building will determine the dwellers happiness.	-	5 (1.4%)	25 (7.1%)	156 (44.4%)	165 (47.0%)	4.37	0.68
D3	Priority for buildings with parks, walkaways, gardens and other outdoor amenities reflects sustainable development practices.	-	7 (2.0%)	29 (8.3%)	152 (43.3%)	163 (47.0%)	4.34	0.71
D4	Building with natural habitat is a compulsory for house buyers.	2 (0.6%)	13 (3.7%)	60 (17.1%)	150 (42.7%)	126 (35.9%)	4.09	0.84
D5	Building which were built from green materials are very good for the health.	-	13 (3.7%)	53 (15.1%)	134 (38.2%)	151 (43.0%)	4.20	0.83
D6	Building which are built from recycle materials are not safe.	25 (7.1%)	58 (16.5%)	111 (31.6%)	105 (29.9%)	52 (14.8%)	3.28	1.12
D7	Building which adopted sustainable development practices are last longer.	2 (0.6%)	5 (1.4%)	68 (19.4%)	164 (46.7%)	112 (31.9%)	4.07	0.78
D8	Sustainable development practices are better than conventional practices in the university campus.	-	2 (0.6%)	48 (13.7%)	179 (51.0%)	122 (34.8%)	4.19	0.68
		Overall					4.13	0.53

Table 6 shows the results of frequency analysis, percentages, mean scores and standard deviation (SD) on aspects of realization of sustainable development practices at UPSI. The findings showed 166 (47.3%) people agree and 94 (26.8%) strongly agree that sustainable development consents are important to the university. However, 64 (18.2%) respondents strongly disagreed that UPSI has a benchmark to assess the level of awareness of the concept of sustainability. A total of 119 (33.9%) agreed, 167 (47.6%) and 45 (12.8%) respondents strongly agreed that UPSI implements sustainability in future development as shown in item E7. Implementing aspects of sustainability in life are crucial in forming a sustainable community (Hanifah et al., 2014).

Table 6. Respondent realization level in campus sustainable development

Item	Question	Percent (%)					Mean	SD
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)		
E1	Is sustainable development concept important to your university?	-	9 (2.6%)	82 (23.4%)	166 (47.3%)	94 (26.8%)	3.98	0.77
E2	Is sustainable development concept important to you?	-	5 (1.4%)	26 (7.4%)	190 (54.1%)	130 (26.8%)	4.26	0.65
E3	Does your university incorporate sustainability as one of its strategies for the future development?	4 (1.1%)	19 (5.4%)	113 (32.2%)	138 (39.3%)	77 (21.9%)	3.75	0.89
E4	Are there any yardsticks available in your university to measure the level of awareness on the concept of sustainability amongst university community?	64 (18.2%)	22 (6.3%)	138 (39.3%)	85 (24.2%)	42 (12.0%)	3.05	1.23
E5	Is sustainability incorporated as part of the post graduate studies?	17 (4.8%)	16 (4.6%)	121 (34.5%)	145 (41.3%)	52 (14.8%)	3.56	0.96
E6	Does the university management takes sustainable development seriously?	4 (1.1%)	30 (8.5%)	131 (37.3%)	140 (39.9%)	46 (13.1%)	3.55	0.86
E7	My university takes into account the future environment sustainability when making long term decisions related to the campus development.	-	20 (5.7%)	119 (33.9%)	167 (47.6%)	45 (12.8%)	3.67	0.76
E8	My university is well known for practicing sustainable development approaches.	11 (3.1%)	48 (13.7%)	136 (38.7%)	117 (33.3%)	39 (11.1%)	3.35	0.95
	Overall						3.65	0.66

Table 7 shows the analysis of appreciation aspects of sustainable development practices at UPSI. The findings show that 138 (39.3%) agree and 56 (16.0%) strongly agree that UPSI values students involved in sustainable development practice. A total of 43 (12.3%) respondents disagreed and 21 (6.0%) strongly disagreed that there was a reward given to individuals adopting sustainable development practices in life. A total of 122 (34.8%) agreed and 45 (12.8%) strongly agreed that sustainable development practices at UPSI are in line with national and international sustainable development goals. Mensah (2019) stated that to achieve Sustainable Development Goals (SDGs), countries should recognize and appreciate and identify complementarities that can promote meaningful progress in sustainable development practices.

Table 7. Level of appreciation in campus sustainable development

Item	Question	Percent (%)					Mean	SD
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)		
F1	My university appreciates students involved in sustainable development activities.	18 (5.1%)	44 (12.5%)	95 (27.1%)	138 (39.3%)	56 (16.0%)	3.48	1.06
F2	My university appreciates anyone who practices sustainable development within the university.	11 (3.1%)	55 (15.7%)	102 (29.1%)	125 (35.6%)	58 (16.5%)	3.46	1.04
F3	There are rewards or token points given to university community or individuals that demonstrates sustainable development concept in every aspect of daily life at university.	21 (6.0%)	43 (12.3%)	153 (43.6%)	90 (25.6%)	44 (12.5%)	3.26	1.02
F4	Does your university recognize and appreciate external parties involved in sustainable development activities?	5 (1.4%)	52 (14.8%)	134 (38.2%)	93 (26.5%)	67 (19.1%)	3.47	1.00
F5	Is there any international conference / seminar organized by your university to address "sustainable development"?	17 (4.8%)	35 (10.0%)	102 (29.1%)	147 (41.9%)	50 (14.2%)	3.50	1.01
F6	My university community practices sustainability without looking for any appreciation or rewards.	21 (6.0%)	52 (14.8%)	117 (33.0%)	112 (31.9%)	49 (14.0%)	3.33	1.07
F7	The growth sustainable development practices in my university are rather organic and appreciation from top management accelerated the acceptance by everyone.	7 (5.1%)	48 (12.8%)	129 (35.9%)	122 (36.5%)	45 (9.7%)	3.32	0.99
F8	My university practices are inline the national and international sustainable development goals and challenges.	7 (2.0%)	48 (13.7%)	129 (36.8%)	122 (34.8%)	45 (12.8%)	3.42	0.94
		Overall					3.65	0.66

IV. CONCLUSIONS

This study shows that the respondents' perception was high with the overall mean 4.03 about sustainable development practices that are practiced in UPSI. Respondent awareness in the aspect of comfort also showed high a level with overall mean score of 4.12 while the aspect of knowledge, realization, and appreciation showed moderate level with the mean score of 3.45, 3.65, and 3.41 respectively.

Conclusion, sustainable development practices are important not only at the university level but also at the national and international levels. Although the level of awareness of sustainable development practices at UPSI is high, everyone should strive to preserve the environment and incorporate sustainable development practices into

daily life. Mumtazah et al., (2013) also stated that sustainable development practices will help conserve the environment quality and encourage prudent attitude towards the exploitation of natural resources.

ACKNOWLEDGMENTS

A special thanks to Universiti Pendidikan Sultan Idris and UPSI Research Management and Innovation Centre (RMIC) for providing grants to conduct this research under Matching Research Grant Scheme University (GPS) code: 2019-0049-106-10.

REFERENCES

[1] Castillo, R. C. (2014). Awareness, acceptance and perception of Batangas State University stakeholders towards its vision, mission, goals and objectives. *International Journal of Sciences: Basic and Applied Research, 14*(1), 545-563.

[2] Hanifah Mahat, Shaharuddin Ahmad, Mohamad Suhaily Yusri Che Ngah & Noraziah Ali. (2014). Pendidikan pembangunan lestari – Hubungan kesedaran antara ibu bapa dengan pelajar. *Geografia, 10*(5), 71-54.

[3] Kasztelan, A. (2017). Green growth, green economy and sustainable development: Terminological and relational discourse. *Prague Economic Papers, 26*(4), 487-499.

[4] Krejcie R. V. & Morgan, D. W. (1970). Determining sample size for research activities. Educational and Psychological Measurement. 30(1), 607-610.

[5] Linn, R. L. & Gronlund, N. E. (2000). *Measurement and assessment in teaching*. Prentice-Hall.

[6] Mensah, J. (2019). Sustainable development: Meaning, history, pillars, and implications for human action: Literature review. *Congent Social Science, 5*(1), 1-21.

[7] Mumtazah Othman, Naimah Mohd Salleh, Putri Musfirah Megat Johari & Farhan Mat Arisah. (2013). Amalan penggunaan lestari "4R" dalam kalangan mahasiswa institusi pengajian tinggi (IPT) di Malaysia. *Jurnal Pengguna Malaysia, 21*(1), 37-55.

[8] Noramida Mokthsim & Khairulmaini Osman Salleh. (2014). Malaysia's efforts towards achieving sustainable development: Issues, challenges and prospects. *Procedia – Social and Behavioral Sciences, 120*(2014), 299-307.

[9] Popescu, C. (2019). Adaptive sustainable academic management practices. *Sustainable Management Practice, 1*, 1-19.

[10] Rosli Said, Anuar Alias, Yasmin Mohd Adnan, Rohayu Ab Majid & Muhammad Najib Razali. (2016). Sustainable housing affordability in Sabah. *Planning Malaysia, 14*(5), 65-76.

[11] Siti Khatijah Zamhari & Christopher Perumal. (2016). Cabaran dan strategi ke arah pembentukan komuniti lestari. *Geografia, 12*(12), 10-24.