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GEOGRAPHY TEACHERS' ATTITUDES OF SUSTAINABLE DEVELOPMENT GOALS (SDGs)

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ABSTRACT

The Sustainable Development Goals (SDGs) agenda aim for another fifteen years to be achieved by 2030 since 2015, include the role of teachers to deliver SDGs elements but depends on the teachers attitude whether to believe it or not. The study focused on the attitude of Geography teachers towards the SDGs based in a survey instrument. The sample population in this study involved 350 secondary school teachers who are teaching Geography in Penang State of Malaysia and sample size was 252 respondents. The findings of the study show that Geography teachers strongly agree with all survey items except only agree that "SDGs are the best way to teach decision-making skills" (M=4.16, SD=0.718). Geography teachers show a positive attitude about the SDGs in terms of the importance of education, the role of teachers in teaching and awareness of nature, society and future generations. The finding also shows that the attitude of SDGs among option teachers is higher than non-option teachers, $t(237, p=.001) = 3.703$, $p<0.05$. Geography teachers also believe in the positive effects of the SDGs on students, society and the world, but their positive views on the SDGs do not reflect teachers' practices in their Teaching and Learning (T&L) activities. This study also reflects the level of cross-curriculum elements (EMK) for teachers related to elements of Global Sustainability and Environmental Sustainability as required in Standard Based Curriculum for Secondary Schools (KSSM).

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INTRODUCTION

The global environmental crisis continues unabated to this day. Future generations are threatened by various environmental crises such as global warming, acid rain, ozone layer destruction, environmental pollution, nature damage and biodiversity loss (Lai, 2018; Mitsuki, 2017). This crisis is caused by unsustainable development that has been practiced for a long time which can be seen through the degradation of the environment, irresponsible planning and greedy exploitation of resources (Ashok Kumar, 2019). Teachers have an important role in bringing about social change that leads to sustainable development and futuristic growth in communities (Nousheen et. al., 2020). Teachers also face many challenges related to global requirements and the need to improve their approach in delivering knowledge to students. At the same time, teachers play an important role in the aspect of attitude in shaping the success of education in order to implement educational policies and achieve academic performance.

Based on global need, Sustainable Development Goals (SDGs) also known as global goals for another fifteen years to achieve 2030 as to continue the Millennium Development Goals (MDGs) that ended in 2015. The United Nations (UN) has set a framework for future progress worldwide to achieve success . Millennium Development Goals (MDGs) through the Post-2015 Development Agenda which is a procedure carried out from 2012 to 2015. Sachs et al. (2016) stated that the MDGs are carried out to see the problem of poverty and this program successfully promotes problems such as poverty, hunger, education, gender well-being, and loss of the environment. Furthermore, as a global issue that cuts across countries, the world community should set a focus and work together to ensure that this problem can be solved together. The MDGs are a combination and balance of the three elements of sustainable development, namely the economy, social and environment (Ferri, 2010).The seventeen goals of the SDGs were created to overcome global problems such as poverty, unemployment, increasing inequality and differences related to gender, wealth and power, political threats, and environment (United Nation, 2015). Additionally, the SDGs are part of the 2030 Agenda for Sustainable Development (United Nation, 2015) and ensure the needs of future generations (United Nation, 1987).

In Geography contexts, Guo (2018) stated that Geography plays a vital role in Environment for Sustainable Development (ESD) even though Sustainable Development (SD) is a Science discipline. Geography teachers should expand their knowledge of SD, to have a deeper impact on teaching and learning (Guo, 2018). The study of space and place in Geography plays a big role in delivering ESD (Sanchez, 2011). Therefore, the role of Geography teachers is also crucial in carrying out the responsibility of delivering ESD. Besides, teachers' attitudes towards the SDGs are critical, which encourages them to put effort into applying them as teaching practice.

SDGs might be new term in education, but the element of Environmental and Sustainability has been introduced for a long time. In Malaysia, Standard Based Curriculum for Secondary Schools (KSSM) outlined the elements of global sustainability in Geography syllabus based on international practice through Standards-Based Curriculum for Secondary Schools (DSKP) since 2014 (Kementerian Pendidikan Malaysia, 2013). The aim of this subject is to produce students with geographical knowledge who can interact with the environmental naturally, towards environmental sustainability and well-being. So, the teacher's attitude plays an important role in creating intentions towards behavior in implementing SDGs elements in the Teaching and Learning (P&P) process.

LITERATURE REVIEW

Attitude is a mental or nervous readiness due to the experience of carrying out instructions or influencing individuals towards objects or situations (Persson et al., 2016). Albarracin et al. (2005), interpret attitude as a psychological tendency to evaluate objects or behaviors with a level of like and dislike. A person's subjective evaluation includes cost, rationality, the influence of affective responses, emotions, and beliefs. Meanwhile, Ajzen (2005), defines attitude as an evaluation of effect from implementation of behavior that produces a belief. Inherent beliefs are either favorable or unfavorable. In this study, teachers' attitudes towards the SDGs are interpreted as teachers' evaluations based on the belief that they are either beneficial or not beneficial regarding SDGs agenda.

A quantitative study by Aye et al. (2019), revealed that secondary school teachers in Myanmar showed a positive attitude even though they lack knowledge of ESD, they have the willingness to teach ESD. However, the skills to integrate the concept of ESD in teaching are not satisfactory. Meanwhile, a study by Cordina and Mifsud (2016) found that primary school teachers in Maltese have a positive attitude, high interest, and are eager

to learn as well as apply for training and guidelines. The study also found that the teachers showed willingness to learn and apply ESD in teaching strategies. A survey study by Jacob (2020) involving 38 pre-service teachers at the University College of Teacher Education Vienna/Krems shows positive attitude towards ESD. Findings in this study show that pre-service teachers agree on the role of teachers in orienting sustainability in education; the importance of including ESD in pre-service education programs and the importance of including ESD in teaching practice for future teachers. However, there is also, teachers feeling stressed and overwhelmed thinking about the application of ESD in teaching. In addition, a study by Nousheen et al., (2020) quantitatively and qualitatively involving 287 pre-services teachers showed a change in positive attitudes towards sustainable development. Pre-services teachers who studied education for elementary school subjects during the course work had a positive attitude compared to the group of teacher trainees who did not study education for elementary school subjects.

A study by Sunthonkanokpong and Murphy (2019) among pre-service teachers in Thailand showed that the overall attitude was positive by showing a high level of empathy towards attitudes related to the 17 goals of the SDGs. Findings show that students have a positive attitude about sustainability and despite having less knowledge about sustainability topics. More than 90 percent of pre-service teachers felt that "ESD was important"; "global access to the internet is very important and having a feeling of empathy towards people who are discriminated against". Meanwhile, a less positive attitude towards SDGs related to feeling empathy towards people who are different from the expected norm in the community in terms of gender.

Therefore, positive attitudes have been shown in many studies from various study that were conducted on ESD or even SDGs. The respondent's attitude in the selected study will be tested to determine the validity of the previous findings and the selected study population considering the lack of research conducted in the context of Geography teachers about SDGs or ESD. Therefore, the level of attitude for Geography teachers regarding Sustainable Development Goals (SDGs) was examined in this study.

METHODOLOGY

In this study, a survey instrument was developed to measure Geography teachers' attitudes towards the Sustainable Development Goals (SDGs). The teacher's attitude survey consists of 14 items, 2 items taken from a study involving university students by Afroz and Zul (2020) and adapted in the context of teachers. Meanwhile, another 12 items are used from studies by Borges (2019), Ko & Lee (2003) and Cordina and Mifsud (2016) which are based on studies among teachers. The selected items consistency is determined by a high Cronbach's alpha value of 0.933. For the feedback scale, a five-point likert scale was used as the respondents feedback option, which is a scale of 1 (strongly disagree) to 5 (strongly agree).

The sample population in this study involved 350 secondary school teachers who are teaching Geography in Penang State of Malaysia. The sample size was 252 respondents exceeding the minimum need 186 respondents based on Krejcie and Morgan (1970). Respondents in this study involved a total of 194 female teachers (77%) who were more respondents than 58 male teachers (22%). The majority of the respondents specialized in the Geography, namely 159 teachers (63.1%) and the remaining 93 teachers (36.9%) were non-option teachers.

The data was analyzed and expressed in terms of means dan standard deviations (SD) by using Statistical Package for Social Sciences (SPSS) version 27. As indicated in Table 1, there were five possible interpretations for the mean score of each item: "Always" (score range: 4.20 or more), "often" (score range: 4.19 to 3.40), "sometime" (score range: 3.39 to 2.60), and "never" (scoring range: <1.80) based on a study by Sözen (2019) related to the scale of Geographical attitudes.

Table 1: Interpretation of Mean Score

Score Mean	Interpretation
1.00 – 1.80	Strongly disagree
1.81 – 2.60	Disagree
2.61 – 3.40	Not sure
3.41 – 4.20	Agree
4.21 – 5.00	Strongly agree

Source: Sözen (2019)

RESEARCH FINDINGS AND DISCUSSIONS

The findings show that teachers agreeable to the attitude of Sustainable Development Goals (SDGs) as shown in Table 2. The respondent's score level for each attitude item is at the mean value (M) between 4.16 and 4.59 and the standard deviation value (SD) is at a moderate level which is between 0.613 and 0.735 based on Ramlee (1999). Geography teachers' attitudes strongly agree and are interpreted as positive towards the SDGs. Similar findings were also reported by Aye et al. (2019) among high school teachers about ESD and among primary school teachers by Cordina and Mifsud (2016). Based on this research, the finding shows that Geography teachers strongly agree that "Geography teachers should be exposed to the methods of applying SDGs" (M=4.35, SD=0.661), "Geography teachers should provide students with opportunities to gain real experience solving sustainability issues" (M=4.45, SD=0.633) and "Geography teachers are supposed to help students develop sensitivity to the SDGs" (M=4.38, SD=0.611). Teachers are positive towards the role of teachers in implementing SDG elements in teaching. In educational contexts, Geography teachers strongly agree in terms of "SDGs need to be given priority in the high school education system in our country" (M=4.37, SD=0.634), "SDGS should be taught in all subjects across the curriculum." (M=4.44, SD=0.644), "SDGs is an excellent way to teach problem-solving skills" (M=4.21, SD=0.714) and agree for "SDGs is an excellent way to teach decision-making skills" (M=4.16, SD=0.718). In education, geography teachers are positive about the importance of the SDGs in the education system for students. In addition, teachers also show a positive attitude about the importance of the SDGs to teachers, students, society and future generations.

Next, the results of the t-test or t-test for Equality of Means found that there is a difference between option and non-option teachers for the attitude with $p<0.05$. Based on the hypothesis, shows that a significant difference in the attitude towards the SDGs for both option and non-option teachers, $t(237, p=.001) = 3.703$, $p<0.05$ as indicated in Table 3. However, based on the mean score value, it shows that the mean value of teachers attitude for option teachers is higher than non-option teachers. The mean score for the teachers attitude for option teachers (M=4.493, SD=0.453) is greater than that of non-option teachers (M=4.276, SD=0.521). So, the level of attitude for option teachers is better than non-option teachers about SDGs in this study.

Table 3: Differences between Option and Non-Option Geography Teachers.

Variable	Min (SD)		Nilai-t (df)	Significan Value (p)
	Option	Non-option		
Attitudes	4.493(.453)	4.276(.521)	3.370(237)	.001

Based on the study, Geography teachers showed a positive attitude about the SDGs in terms of the importance of education, the role of teachers in teaching and awareness of nature, society and future generations. Ajzen (1991) stated that a person's attitude towards something is based on perception and what he believes is either positive or negative. The findings of the study show that Geography teachers believe the positive impact of the SDGs on students, society and the world. Knowledge about the SDGs received by teachers creates confidence because positive beliefs will lead to the intention to act on them. Belief will form an awareness of the goodness of a change that causes the teacher to support the change. Attitudes towards the SDGs were also identified to predict actual behavior involving change. Kaliyaperumal (2004) stated that when a person's knowledge increases, it will influence attitudes and practices, create awareness about these matters and produce changes to practices (Hilmi & Kamaliah, 2013). However, the positive attitude of SDGs does not represent teachers that practiced in their Teaching and Learning planning due to factors that vary in schools but are not examined in this studies.

Table 2: Attitudes of Geography teachers of Sustainable Development Goals (SDGs)

	Items	M	(SD)	Interpretation
1.	Increasing awareness of Sustainable Development Goals (SDGs) among teachers is very necessary.	4.43	0.618	Stongly Agree
2.	A basic course on the SDGs must be provided to teachers.	4.35	0.661	Stongly Agree
3.	Geography teachers should be exposed to the methods of implementing SDGs.	4.45	0.633	Stongly Agree
4.	Geography teachers should provide students with opportunities to gain real experience solving sustainability issues.	4.38	0.611	Stongly Agree
5.	Geography teachers are supposed to help students develop sensitivity to the SDGs	4.36	0.624	Stongly Agree
6.	Every child must obtain an education that can teach about knowledge, perspectives values, issues and skills for a sustainable life in the community.	4.42	0.597	Stongly Agree
7.	SDGs need to be given priority in the high school education system in our country.	4.37	0.634	Stongly Agree
8.	SDGS should be taught in all subjects across the curriculum.	4.44	0.644	Stongly Agree
9.	SDGs is an excellent way to teach problem-solving skills.	4.21	0.714	Stongly Agree
10.	SDGs is an excellent way to teach decision-making skills.	4.16	0.718	Agree
11.	The present generation must ensure that future generations inherit a society that is at least as healthy, diverse and productive as it is now.	4.44	0.612	Stongly Agree
12.	We need more stringent laws and regulations to protect the environment.	4.61	0.585	Stongly Agree
13.	Overuse of natural resources is a serious threat to the health and well-being of future generations	4.58	0.617	Stongly Agree
14.	Sustainable development will not be implemented until rich countries stop exploiting the labor and natural resources of poor countries.	4.34	0.732	Stongly Agree

CONCLUSION AND RECOMMENDATION

The study focused on the Geography attitude teachers toward Sustainable Development Goals (SDGs) in general but not on all the seventeen goals of SDGs. Geography teachers showed a positive attitude about SDGs in terms of the importance of education, the role of teachers in teaching and awareness of nature, society and future generations. The attitude of SDGs among option teachers is higher than non-option teachers. Teacher's knowledge regarding SDGs creates confidence because positive beliefs will lead to the intention to act on them. The intention will create a belief to form an awareness of the goodness of change, that causes the teachers to support the change. Based on the result, Geography teachers believe the positive impact of SDGs on students, society and the world but their positive view of SDGs does not reflect teachers practices in their Teaching and Learning (T&L) activities. In addition, this study also provides a reflection on the level of cross-curricular elements (EMK) for teachers of Global Sustainability and Environmental Sustainability elements that are in line with the Standard Based Curriculum for Secondary Schools (KSSM).

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