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Current Trends and Patterns of Environmental Citizenship: Behavioural Insights from Primary School Students of India

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ABSTRACT

Environmental citizenship is an internationally acknowledged and researched concept due to its potentiality in preparing students as future citizens with an ability to contribute in a positive manner in the mitigation of ongoing environmental crises. These environmental issues are non-territorial and demand collective initiatives. Environmental citizenship holds that potentiality of bringing the people from different nation to work for a common cause. The aim of the study was to explore the concept of environmental citizenship in Indian milieu through analysis of behavioural insight of Primary school students. The data from a random sample of, n = 204 (93 females and 111 males) was collected through a self-designed online survey ECO. The behavioural insights of students on environmental literacy, environmental responsibility, pro-environmental behaviour and environmental activism was gathered. It was found that students showed patterns of environmental citizenship. Environmental literacy and activism were found to be high in student but they lack in environmental responsibility and pro-environmental behaviour. This is because of the externality of locus of control and lack of intrinsic belongingness with environment. The study suggests that environmental consciousness pedagogies and ample opportunities for engagement with nature can promote positive virtues of environmental citizenship in the students.

Keywords: Environmental Citizenship, ECO, Environmental Literacy, Pro-Environment Behaviour, Environment Responsibility, Environmental Activism, NEP 2020 etc.

Honourable Prime Minister of India at Conference of Parties (COP) 26 of United Nations Framework Convention on Climate Change (UNFCCC) at Glasgow in 2021 gave a one-word movement to the world "LiFE". This word holds a great meaning in terms of its functionality and requirement of the coming generations. LiFE stands for Life style for environment. It should be turned into a mass movement of Environmental Conscious Life Style. In his national statement he also acknowledged that we need to have Mindful and Deliberate Utilization, instead of Mindless and Destructive Consumption. These movements together will surely set goals that can transform the different sectors like Farm & Agriculture, Health, Food Habits, Packaging, Housing, Hospitality, Travel, Clothing & Apparels, Water Management and Energy (Ministry of External Affairs [MEA], Government of India [GOI], 2021). This is not the only initiative which was floated for mitigation of issues related to climate change. There is a historic legacy of efforts and initiatives in place by United Nations but the centrality of these measures has been the promotion of principle of sustainability in the masses (Varish and Sharma, 2023).

The primary question which comes to our mind whenever initiatives for environmental protection

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are discussed or announced by international organisations is that why these measures are needed or how to achieve these goals. The answer to first question needs no answer rather it can be felt by all individuals from their lived experiences. IPCC (2023) highlights those human activities which are principal source and cause of many climate challenges. The human lead emissions of greenhouse gases are causing global warming, changes in atmosphere, ocean, cryosphere and biosphere are highly evident. We are experiencing habitat loss, biodiversity losses, threat to food security, inland flooding, desertification, flood in coastal areas etc. are some of the unprecedented environmental crisis. These crises are not limited to global sphere but they are affecting our day today working and hence harming us at local level too. Hadjichambis and Reis (2020) talked about emergence of new environmental problems like climate engineering, genetic pollution and genetic drift, water stress, extended seasons like extreme hot summers, extreme winters, extended air pollution, challenges of widespread vector borne disease etc. This list of environmental crises is never ending. Their mitigation surely needs a collective call and efforts from different nation. The approach for these issues has to be a whole planet approach which is transboundary in nature. In such predicament the answer to second question become quintessential. The "How" of achieving and making the campaign of environmental conservation meaningful lies with humans, it is the people who possess the potentiality to make these efforts of climate change mitigation a success. We need to promote awareness and virtue of environmental sensitivity in the citizens. Hadjichambis and Hadjichambi (2020) call for a need to build a citizenry who is self-motivated and well equipped to work for betterment of the environment.

In this scenario we need to promote the cardinal principles of environmental citizenship in the young learners especially from the foundational and preparatory stages of school education. The term environmental citizenship is well debated in political sphere. There are many similar terminologies available in educational literature which are relevant to environmental citizenship (Hadjichambis & Reis, 2020). There have been theoretical and empirical attempts in academia for defining and conceptualising the idea of environmental citizenship since Stockholm declaration of 1972 where the importance of environmental education was felt for prevention of human environment under the adopted 26 principles.

1. Conceptualisation of Environmental Citizenship

Sharma and Pandya (2015) considered that it was Rio Earth Summit of 1992 which resulted in declaration of Agenda 21, it recognised the value associated with education. Education was considered to be critical for effective public engagements. The education and sustainability were brought together after this declaration. Education for sustainable development becomes a field of investigation and research.

It was in Hawthorne and Alabaster (1999) who made an attempt to provide a working definition of attributes or components of environmental citizenship. It was an attempt to come with a model of environmental citizenship. They considered environmental citizenship as the ultimate outcome of education for sustainability, a process which is all about changing people's attitudes, providing access to knowledge and developing skills which combine to influence behaviour.

Hadjichambis and Reis (2020) has identified that concepts such as environmental citizenship by Dobson, Ecological citizenship by Jagers and Matti, sustainability citizenship and green citizenship by Barry were considered close to the conceptualisation of environmental citizenship.

The multiplicity of the idea and availability of different definition of the environmental citizenship made it difficult for researchers to take it up as field of study. There was a need for a operationalised definition which can provide a framework for research in the field of environmental citizenship.

It was by the European Network for Environmental Citizenship (ENEC) – funded as a COST Action in 2018 that made an attempt to define environmental citizenship in more concrete manner. It defined environmental citizenship as —

> *the responsible pro-environmental behaviour of citizens who act and participate in society as agents of change in the private and public sphere on a local, national and global scale, through individual and collective actions in the direction of solving contemporary environmental*

problems, preventing the creation of new environmental problems, achieving sustainability and developing a healthy relationship with nature. 'Environmental Citizenship' includes the practise of environmental rights and duties, as well as the identification of the underlying structural causes of environmental degradation and environmental problems and the development of the willingness and the competences for critical and active engagement and civic participation to address those structural causes and to act individually and collectively within democratic means, taking into account inter- and intra-generational justice (Handjichambis et al. 2020, p.8).

This research draws its operationalisation of environmental citizenship in close association with the aforesaid definition. This field of environmental citizenship is still experiencing development of new framework like of Biresselioglu *et al.* (2022) who considered responsibility, pro-environmental behaviour and justice as key drivers for promotion of environmental citizenship.

2. Operationalisation of Environmental Citizenship for the study

This study has relied on the definition of ENEC for developing the construct. In order to understand the trend and patterns of environmental citizenship in students this study considered the virtue of sustainability at core. In present study the environmental citizenship is being analysed under four domains. The domains are environmental literacy, environmental responsibility, pro environmental behaviour and environmental activism.

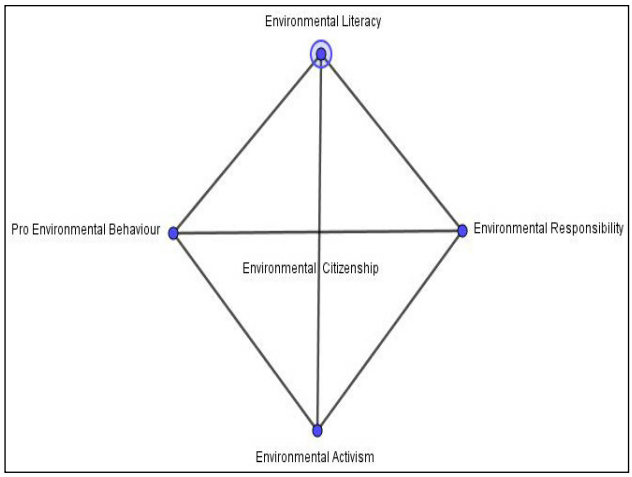

Fig. 1: Domains of Environmental Citizenship

(a) Environmental Literacy

The idea of environmental literacy refers to the awareness which is acquired through knowledge and understanding. It is also seen as basic functional knowledge which provides them with the necessary knowledge, skills and motives to cope with environmental needs and equip them for contribution to sustainable development (Hawthorne & Alabaster, 1999).

(b) Environmental Responsibility

In this study environmental responsibility is considered as a desire to act with a notion that humans are subjects who process the available natural resources holds responsibility for the environment and various environmental components. Sigit *et al.* (2019) define it as a behaviour in which a human being is responsible for his daily action so that his environment can be maintained. It considers the feeling of emotion in relation to the understanding of being responsible.

(c) Pro Environmental Behaviour

The students' attitude, value and competence to a decision or making behavioural choice by considering environment at core is considered as pro-environmental behaviour. Stern (2000) defines it as when an individual is aware of harmful consequences of action and they chose to act to protect or preserve the environment. This behavioural choice can be made in private or public sphere. These choices are very personal to individual and made on the basis of their attained environmental consciousness.

(d) Environmental Activism

Environmental activism is associated with action in public sphere. It is considered as a virtue in student if they agree to have an active involvement in environmental organisations, demonstrations and campaigns, participation in social movements for environmental conservations and extending support to environmental initiatives (Goldman *et al.* 2020).

This study tries to analyse the behaviour of students in the above mentioned domains. These domains provide an insight on the environmental citizenship in the learners.

2. Objectives of the Study

The main objective of this research work was to:

- ❒ To explore the environmental citizenship in Indian Schools at Primary level.
- ❒ To analyse the behaviour of Primary school students in order to recognize the trends and patterns of Environmental Citizenship.

3. Methodology

This study was exploratory in nature and has tried to explore the scenario of environmental citizenship in the school children.

1. Sample and Sampling technique

A sample of 204 students of grade five students was selected as the sample of the study. This selection was random as data was collected by self-designed questionnaire which was shared in the class by the investigator with the help of class teacher. All the collected responses were analysed. These students were not selected beforehand rather they filled the form randomly.

2. Demographic Details of Sample

In order to understand the demography of the sample age of the respondent and gender were the only two factors which was asked in the survey.

(a) Age group of the sample

The age group of the sample was between 09 years to 10 years of age i.e. the selected sample was above 09 years of age and less than 11 years of age.

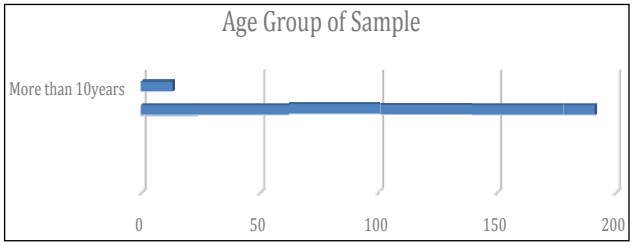

Fig. 2: Age group of selected sample population

(b) Gender of the sample

There were 93 females and 111 male students in the sample population of this study.

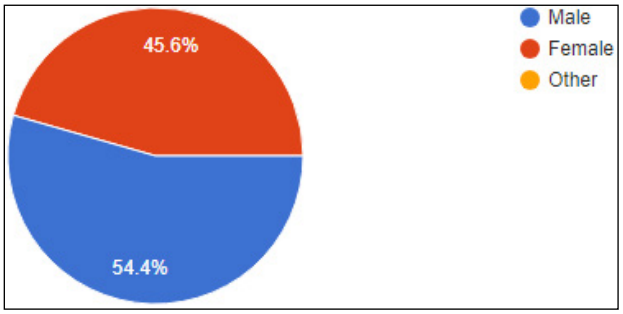

Fig. 3: Gender distribution of the selected sample

3. ECO: The tool for Environmental Citizenship in Students

The important aspect of the study was to develop an Environmental Citizenship Opinionnaire (ECO) for the Primary school students. Although available literature suggests availability of different constructs based around the theme of environmental citizenship such as 76 item based ECQ (Environmental Citizenship Questionnaire) by Hadjichambis & Hadjichambis (2020), E-PVQ (Environmental Portrait Value Questionnaire) by Bouman *et al.* (2018) or SCQ (Sustainability Consciousness Questionnaire) of Gericke *et al.* (2019) etc. but the researchers felt the need for a self-made tool for data collection. The items of the tools were designed in simpler language further the number of items were kept twenty only so that respondent can complete the survey.

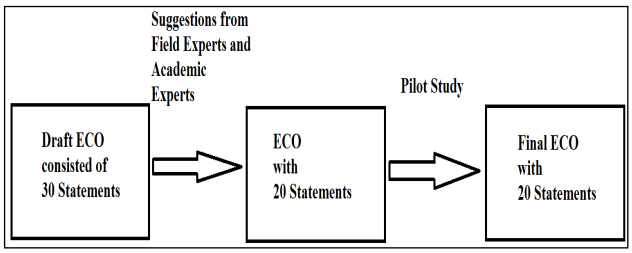

Fig. 4: The process of developing the ECO for Primary school students

(a) Draft ECO and its items

The draft tool was prepared by researchers with the help of available literature and continued discussion with other peers. Discussion with peer groups helped in structuring the tools and bringing out the themes for the same.

(b) Content validity and Face validity of the ECO

Opinion of five experts was taken for each tool on the relevance of the content being used in the tool. These experts were both subject or academic experts and field experts. Here subject experts were those who are taking research papers at department or college level and faculty members taking environment studies as a subject. On the other hand, field experts were those who were actively engaged in the conservation of environment or teachers of schools.

Face validity of the tool was judged by the same five experts as they provided an overall feedback of the tool and the suggested feedback was incorporated in the tool. The feedback was about the language of framed questions and comprehension of the same. On the basis of suggestions of the experts the number of statements of the ECO was reduced to 20 and the language of some statements were made simpler.

(c) Piloting of ECO

A group of 10 students of class fifth were asked to fill the revised ECO. The observations from the piloting of the tool helped in further minor modifications. Researchers made some instructional changes and ordering of the questions in the final ECO before taking it to the field for data collection.

(d) Description of Final ECO

It contained 20 statements based on the behavioural traits of an Environmental citizen. These 20 statements were a mix of both negative and positive statements.

Table 1: Description of items based on the nature of statement of ECO

Sl. No.	Type of Statement	Number of statements
1	Positive statements Example: *I am well-informed about environmental issues such as climate change, pollution, and surrounding environment.*	8
2	Negative statements Example: *I avoid dustbin in my room or home as it occupies a lot of space.*	12
	Total Items	**20**

Students were asked to give their opinion on the scale of five i.e. Strongly disagree, disagree, undecided, agree and strongly agree. The scoring of positive statements was done in an increasing manner and of the negative statements it was the other way round. This indicates that a student with a high agreement score shows more traits of environmental citizenship.

The twenty items or statement of ECO were from different domains or focus area of environmental citizenship.

Table 2: Items of ECO based on the domain of Environmental Citizenship

Sl. No.	Domain of Environmental Citizenship	Item or Statement number	Number of statements
1	Environmental Literacy	1, 4, 14, 19	4
2	Environmental responsibility	5, 7, 18, 20	4
3	Pro-environmental behaviour	2, 3, 9, 10, 11, 12, 16	7
4	Environmental Activism	6, 8, 13, 15, 17	5
		Total Item	**20**

4. Data Collection

In order to follow an environmental responsive behaviour the final version of ECO was converted to a google survey form. This digital version of tool was shared on different social media platforms of a selected school with a request and instruction that the survey is for class fifth students only. The gathered data was analysed in qualitative manner i.e. under the different domains of environmental citizenship.

FINDINGS AND ANALYSIS

The findings of study highlighted the following crucial insight into the understanding about environmental citizenship in the Primary school students of India.

Contemporary Scenario of Environmental Citizenship in Indian Schools

The revelations from the data of ECO on environmental citizenship has acknowledge that student do possess some understanding of

environmental citizenship. The term is not explicitly discussed by learners but they do hold the virtue of environmental citizenship. These findings are pivotal in the sense that it can help in reflecting whether what kind of initiatives can be taken at school level or by the community to promote the virtues of environmental citizenship in the young minds.

Analysis of behaviour of students through ECO

The ECO was developed to garner the behavioural insight of students on the idea of environmental citizenship. The choices made by students on the provided statements are sagacious enough to acknowledge and identify the traits of environmental citizenship in the learners. The twenty statements of ECO are being presented here under the four identified domains of environmental citizenship as per the conceptualization of the term.

1. Environmental Literacy

The ECO consisted of four statements to identify the environmental literacy in students. These statements were 1, 4, 14 and 19. The student responses on these statement can be seen in Fig. 5, 6, 7 and 8 respectively. From the responses of students, it is clearly observable that they do possess some knowledge about the environment and are certainly aware about the environmental crisis (Fig. 5). The statements 4, 14 and 19 were framed to test the implicit nature of environmental literacy in students as these statements were negatively framed. It is evident from the responses in Fig.

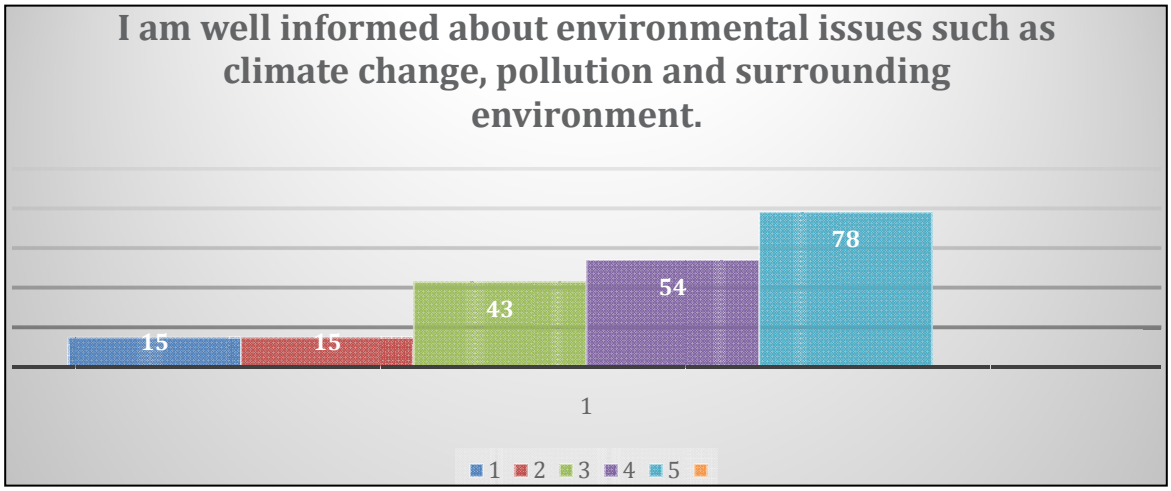

Fig. 5: Responses of students on Statement-01

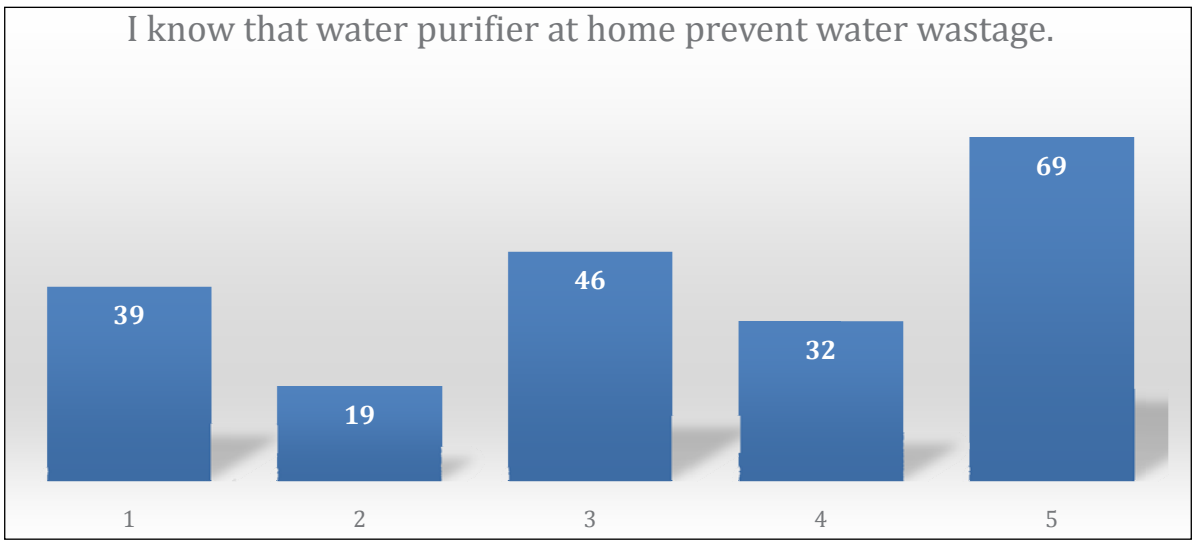

Fig. 6: Responses of students on Statement-04

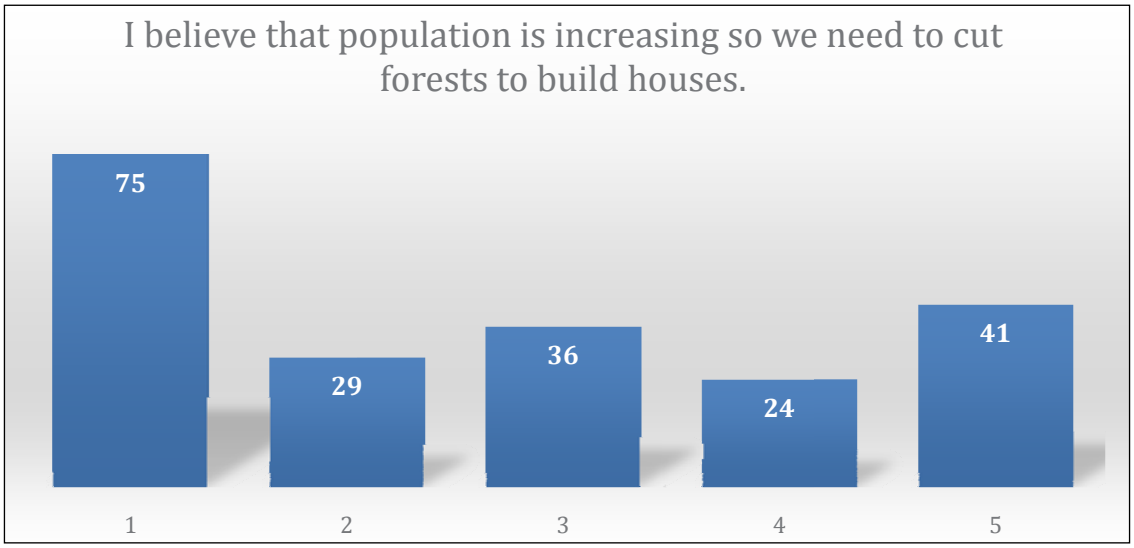

Fig. 7: Responses of students on Statement-14

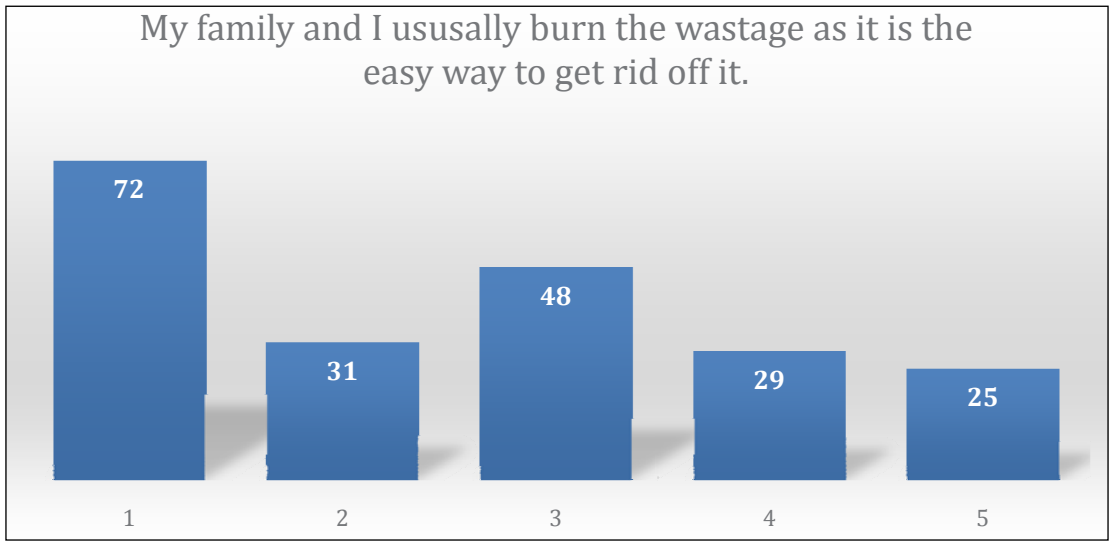

Fig. 8: Responses of students on Statement-19

6 that many students failed to acknowledge that water purifier actually waste a lot of water rather than preventing. Here it seems that student do lack deeper knowledge and understanding on some of the concept related to environment. It indicates that applying the acquired environmental literacy in implicit manner through analysis of situation need to be promoted in students.

2. Environmental Responsibility

The ECO consisted of four statements to identify the environmental responsibility in students. These statements were 5, 7, 18 and 20. The Fig. 9, 10, 11 and 12 shows the student response respectively in the statements. The responses of student from Fig. 10 and 11 indicate that students do hold a sense of responsibility towards environment. They do consider their actions to be a responsibility towards environment but the Fig. 12 shows that the locus of control for owing the responsibility is external in students (Hawthorne & Alabaster, 1999). Many students thought that environmental issues are responsibility of government and not theirs. Also from Fig. 9 it is evident that when an environmental responsible action is expected from them at individual level then students chose their comfort first. This indicates that their action towards environment has not become a personal norm rather it still works on social norms.

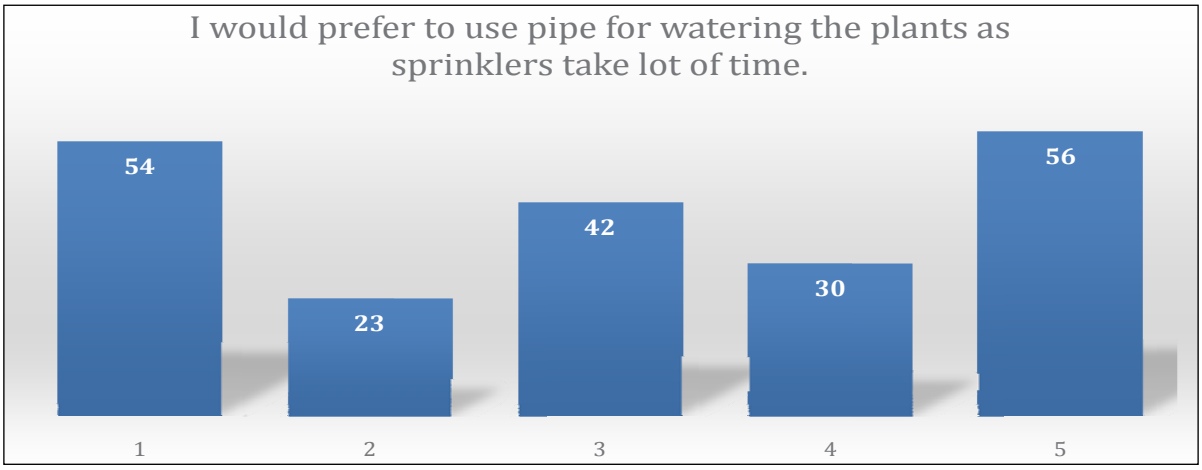

Fig. 9: Responses of students on Statement-05

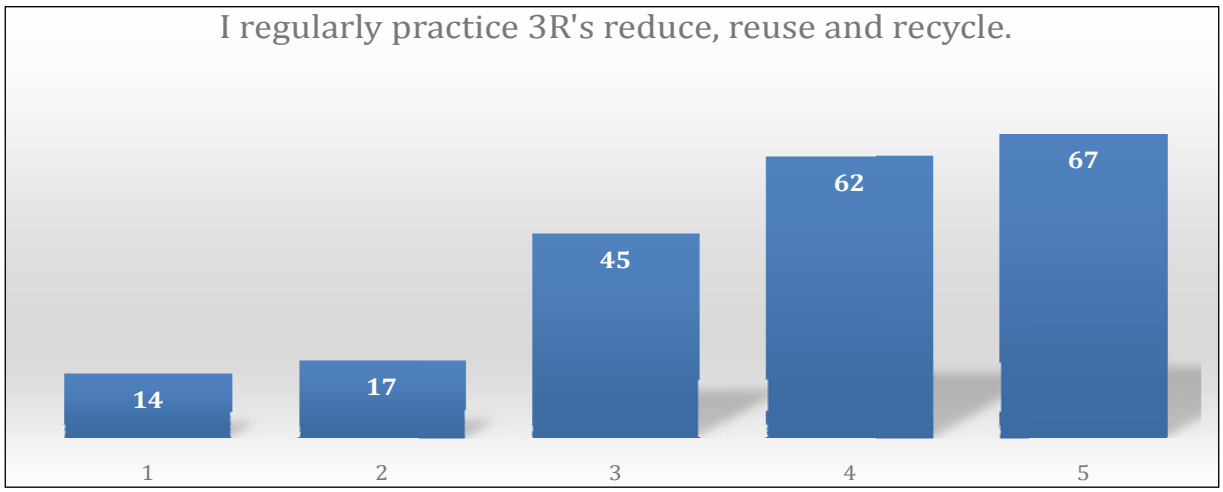

Fig. 10: Responses of students on Statement-07

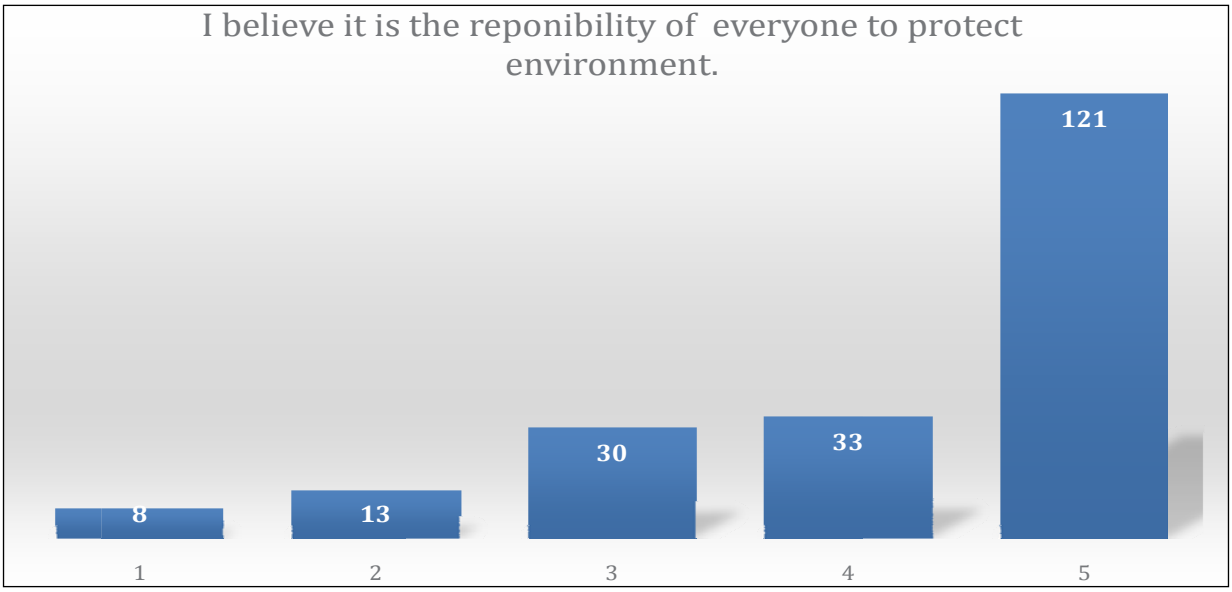

Fig. 11: Responses of students on Statement-18

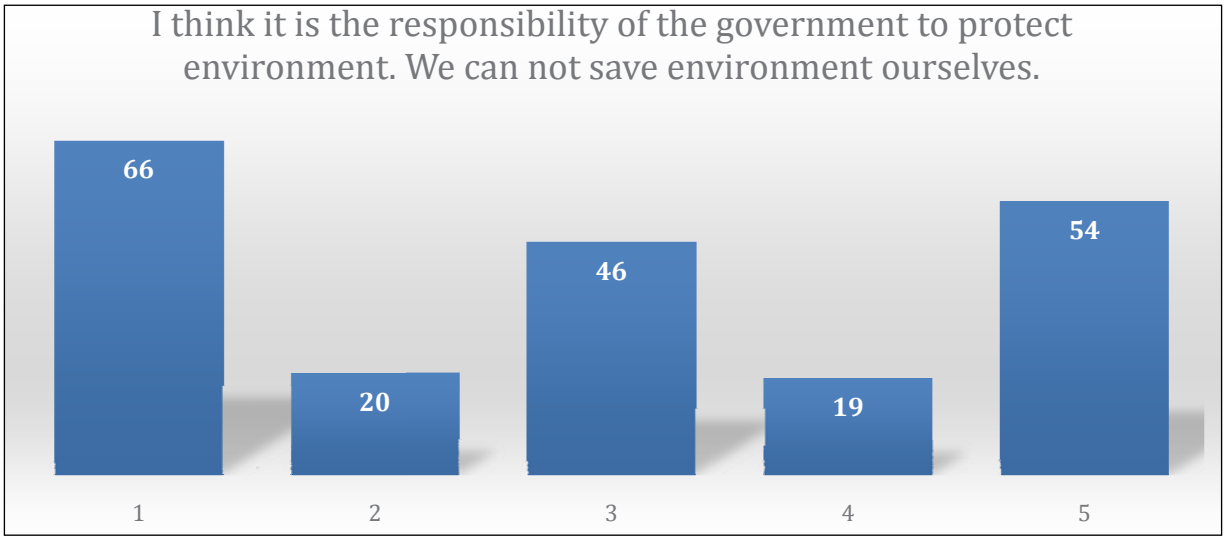

Fig. 12: Responses of students on Statement-20

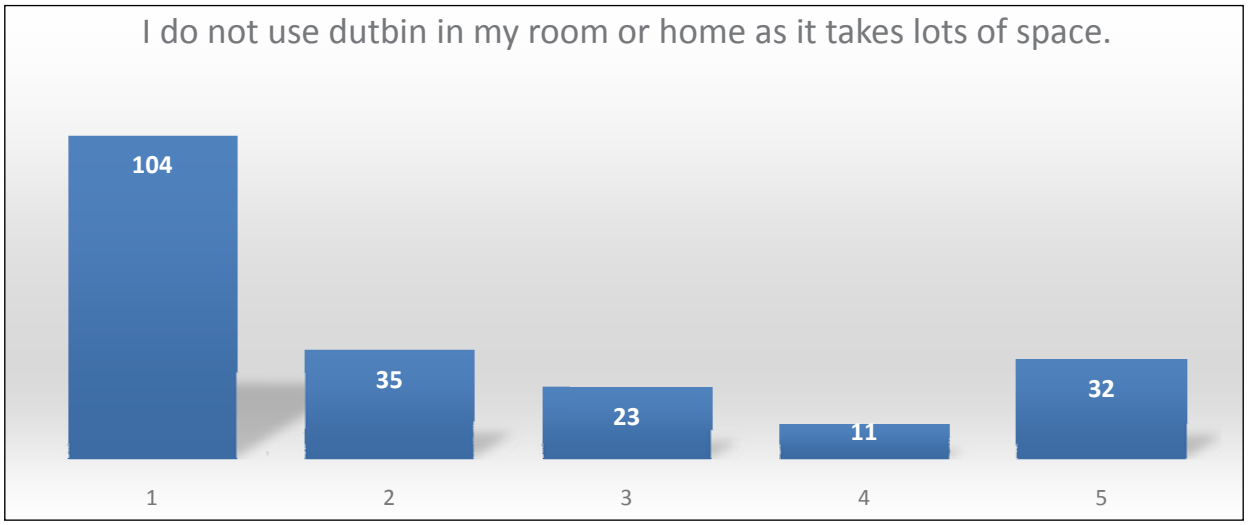

Fig. 13: Responses of students on Statement-02

3. Pro-Environmental Behaviour

The ECO consisted of seven statements on this domain. These statements were 2, 3, 9, 10, 11, 12 and 16 which tried to look at the pro-environmental behavioural choices in students. The responses of students on these statements are in Fig. 13, 14, 15, 16, 17, 18 and 19 respectively. All the statement on pro-environmental behaviour were made negative and were based on personal sphere of action. The high disagreement was considered to be an ideal response on these statements. The response in Fig. 13, 18, and 19 shows that student make pro-environmental choices in lifestyle. Also these statements are very close to following a social norm or ought to behaviours like switching off the vehicle at red light, keeping dustbins and ban on loud music in night. There high disagreement shows that social norm is promoting pro-environmental behaviour. The responses of students in Fig. 14, 15 and 16 indicated that students find it difficult to make pro-environmental choice at the cost of personal comfort. This somewhere highlight that pro-environmental behaviour is not considered as a personal duty or lifestyle approach (Melo-Escrihuela, 2015). The student gave mixed responses on statement 11 (Fig. 17) shows that students pro-environmental behaviour also shaped by the environmental narratives. In present scenario the electric vehicle industry is coming with innovations and promoting electric vehicle as environment friendly choice.

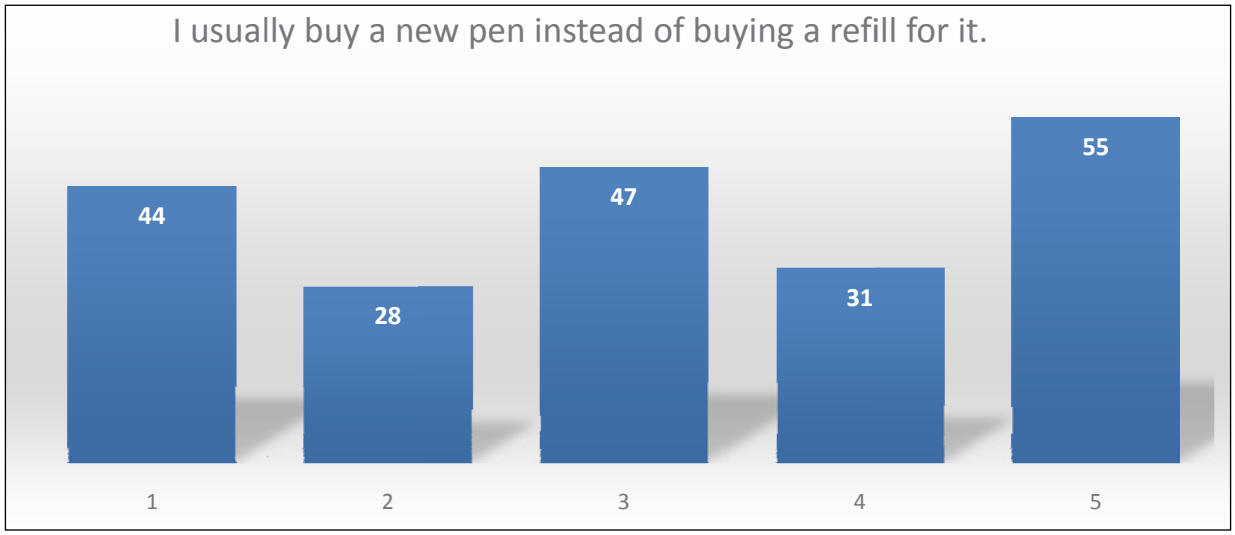

Fig. 14: Responses of students on Statement-03

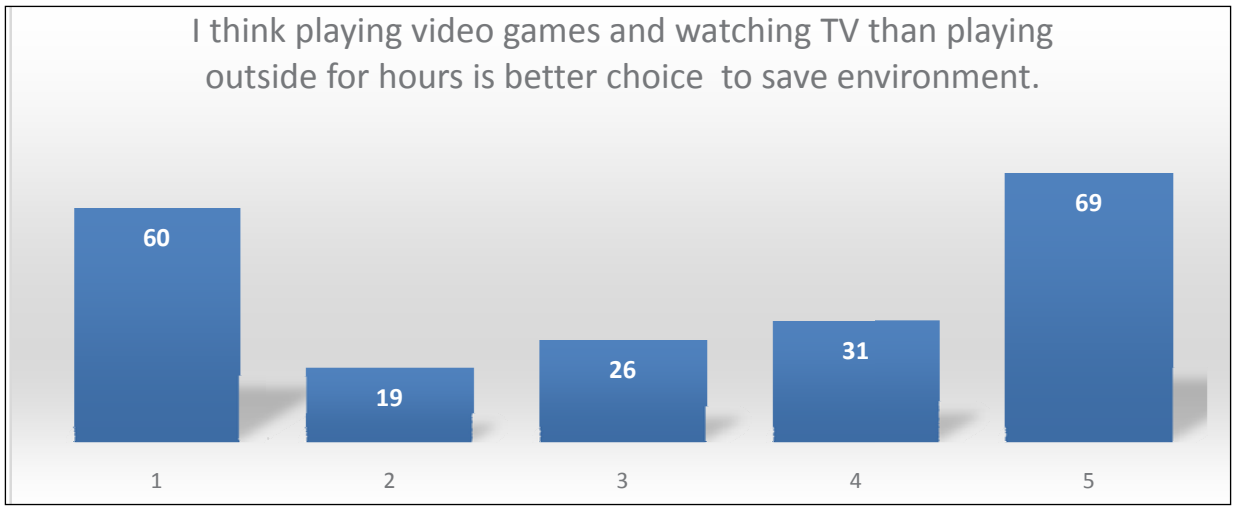

Fig. 15: Responses of students on Statement-09

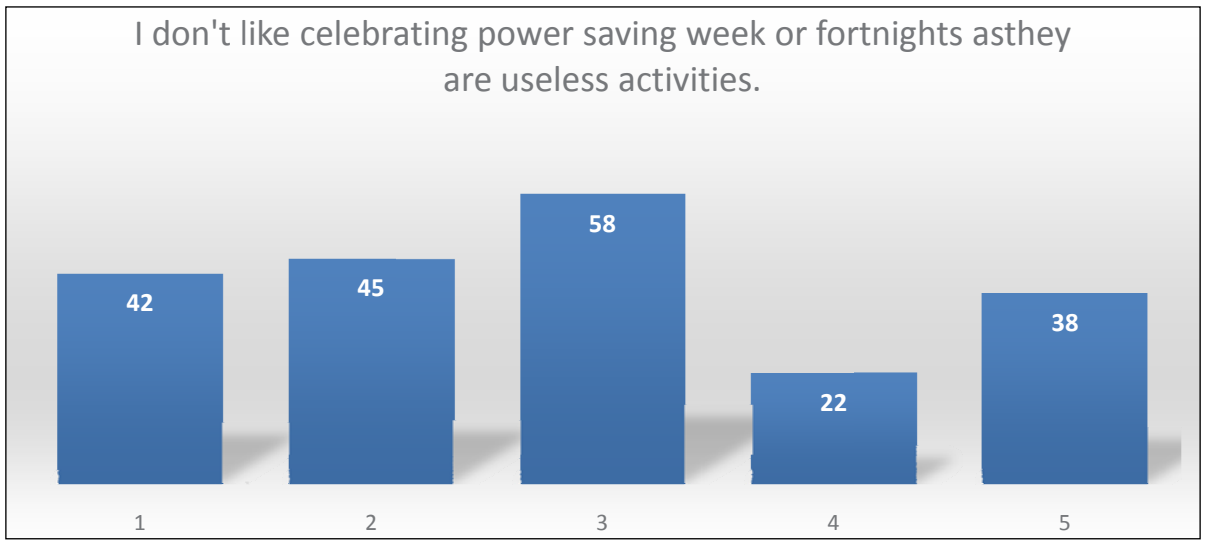

Fig. 16: Responses of students on Statement-10

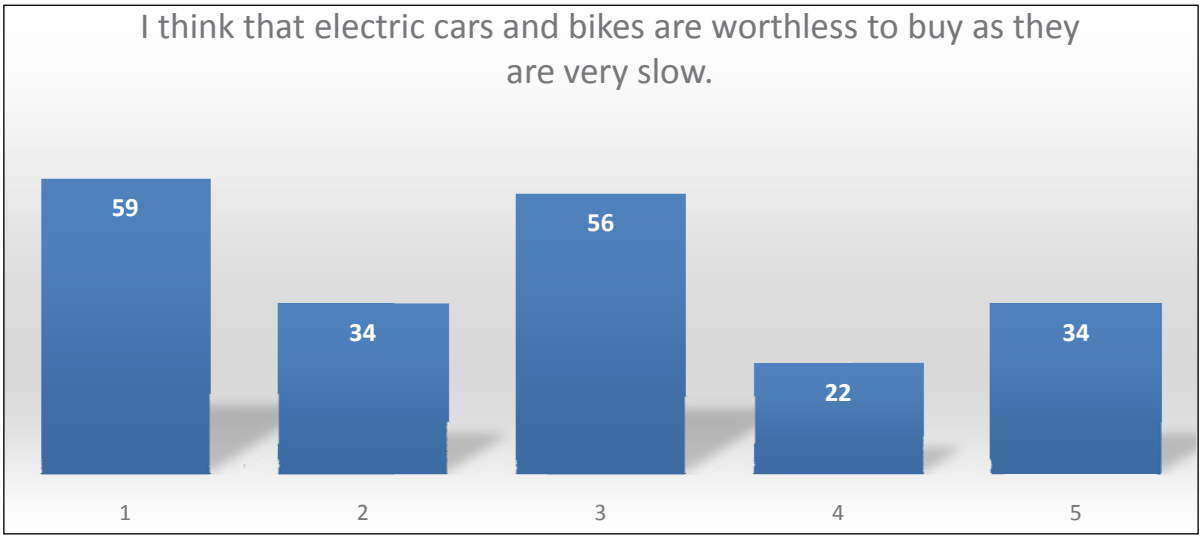

Fig. 17: Responses of students on Statement-11

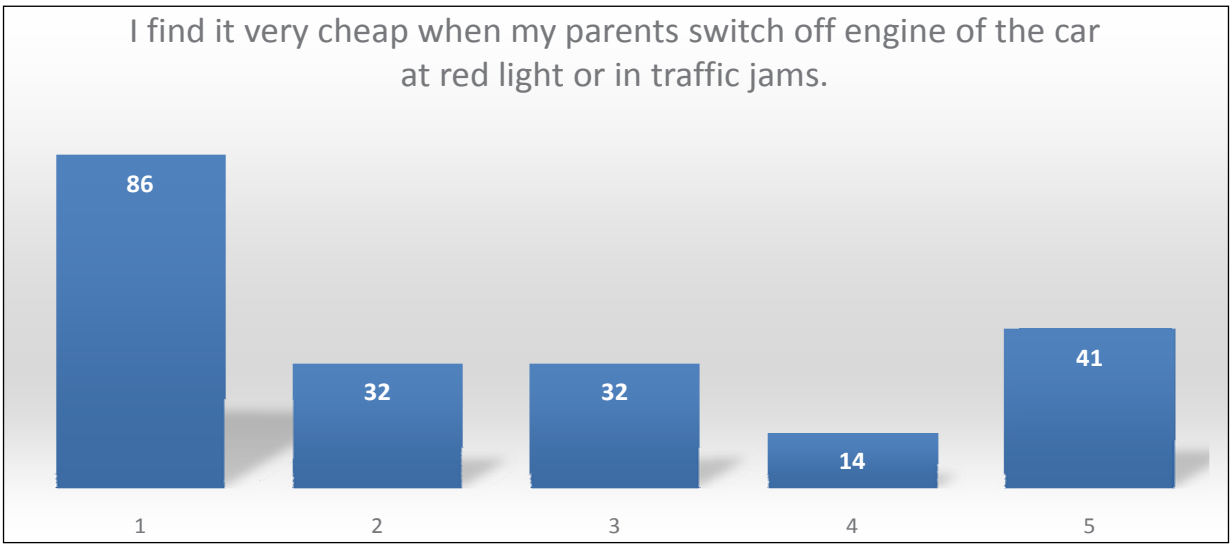

Fig. 18: Responses of students on Statement-12

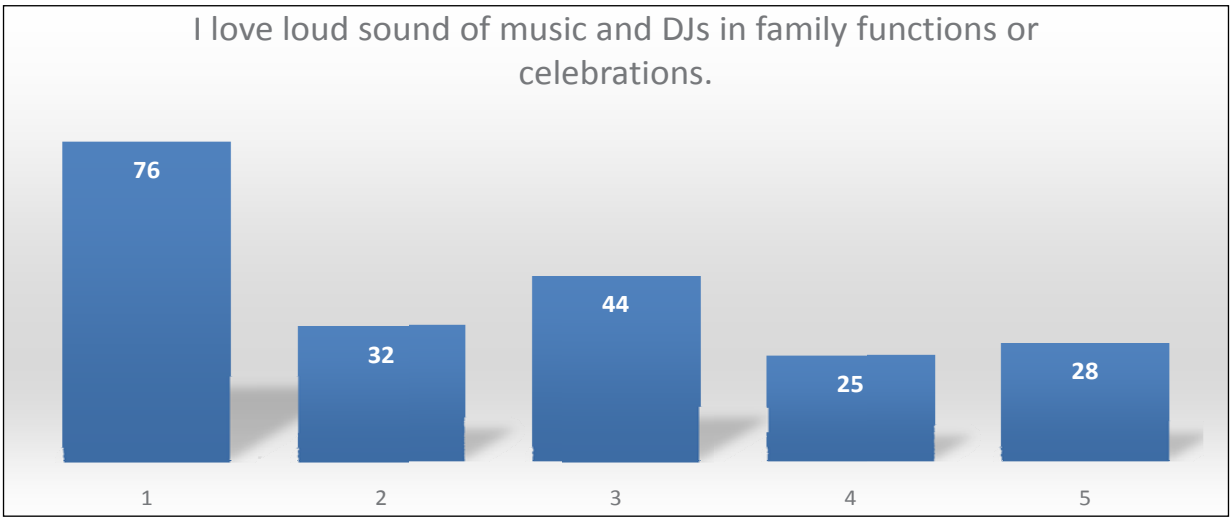

Fig. 19: Responses of students on Statement-16

4. Environmental Activism

In order to identify the environmental activism related choice making in student there were five statements in ECO namely 6, 8, 13, 15 and 17. The Fig. 20, 21, 22, 23 and 24 respectively depict the responses of students on above mentioned statements on environmental activism. All the statements were positive and hence a higher score shows high agreement with statement. Students have shown high agreement with the statements like 6, 15 and 17 (Fig. 20, 23 and 24) which indicate that student support and take part in environmental activism opportunities through active involvement or taking stand for environmental conservation. The mixed responses of students in Fig. 21 and 22 however shows that some students don't chose

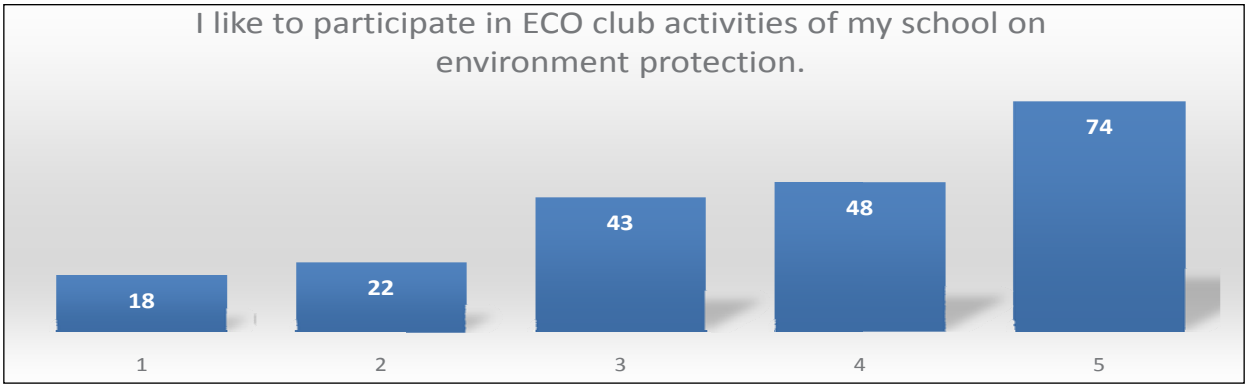

Fig. 20: Responses of students on Statement-06

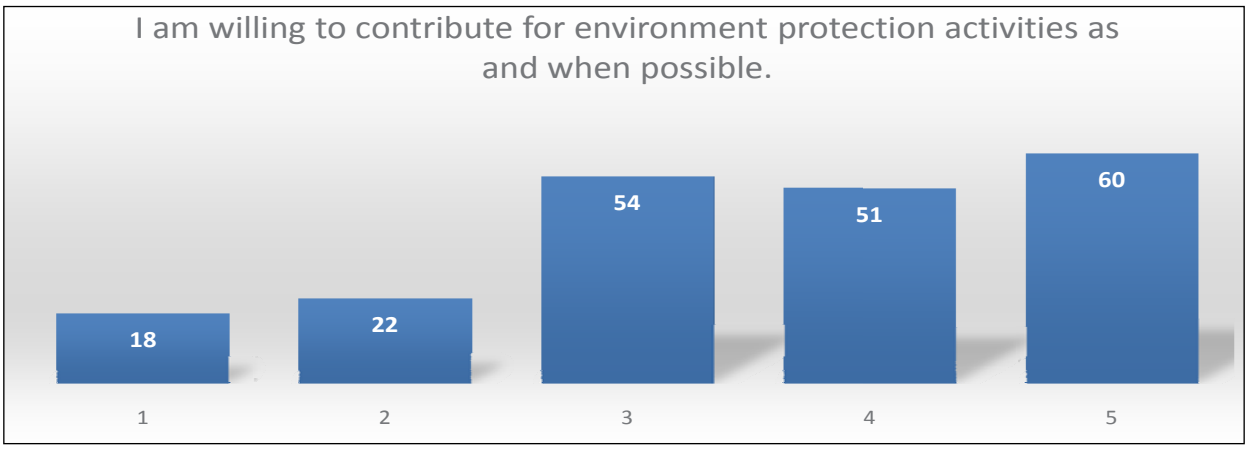

Fig. 21: Responses of students on Statement-08

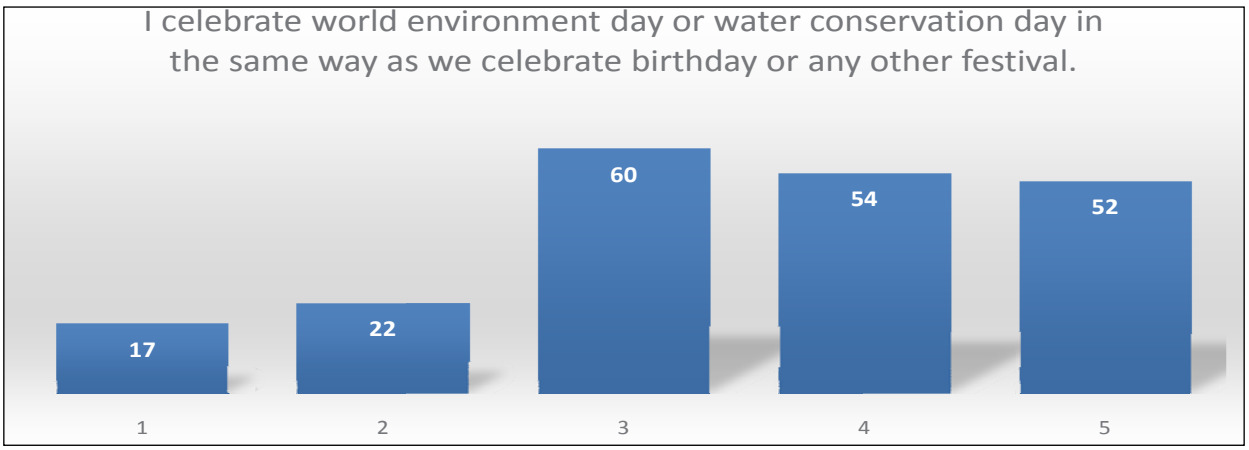

Fig. 22: Responses of students on Statement-13

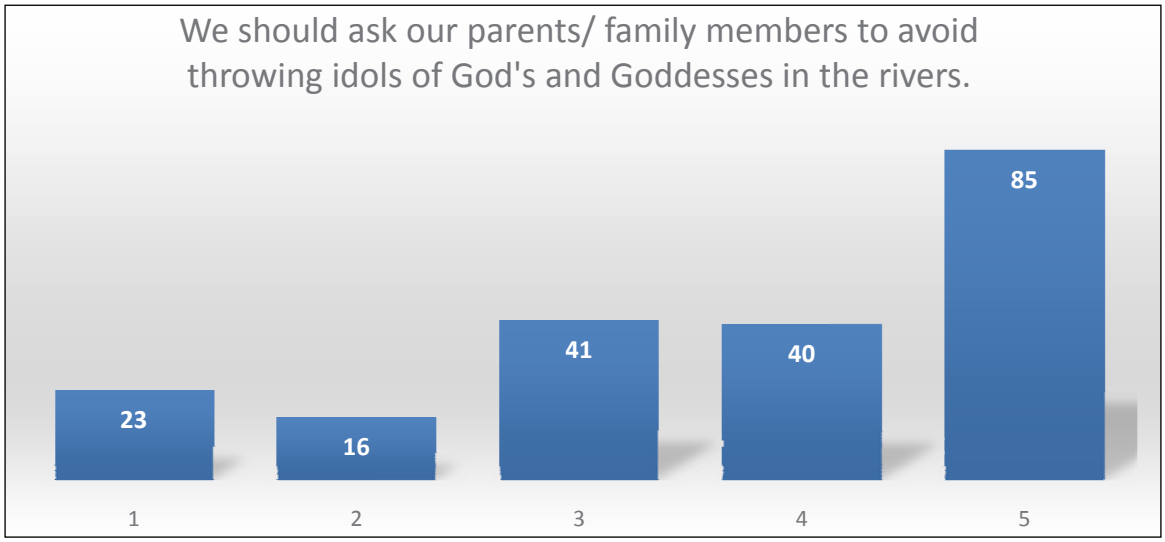

Fig. 23: Responses of students on Statement-15

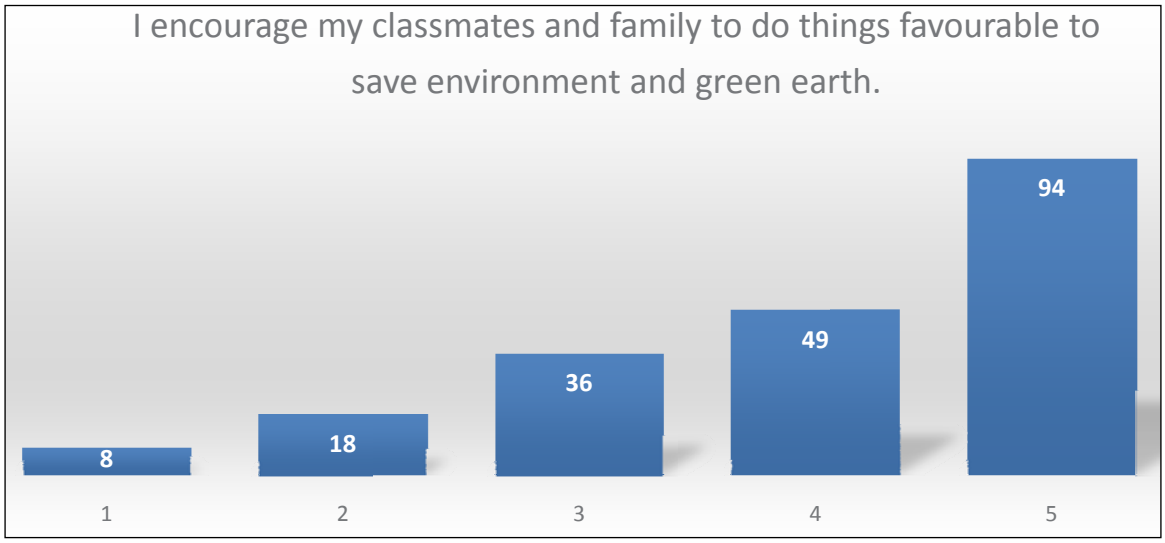

Fig. 24: Responses of students on Statement-17

environmental activism as personal and first preference. Many students took a neutral stand in case of showing willingness to volunteer time for environmental conservation and considering conservation days at par with grand celebrations.

CONCLUSION

The main aim of this study was to explore the potentiality of the idea of environmental citizenship in the school students of India because there are hardly any empirical researches on this idea. Environmental citizenship seems to be a well-defined and established concept in other countries but not in India. The study highlights that despite lacking a formal acknowledgement of the concept of environmental citizenship, Indian students hold some sense of environmental citizenship. The responses on ECO in four domains of environmental citizenship indicate that students holds are environmentally literate. This is because the Indian education system has considered environmental education as integral part of student learning. It has been acknowledged by the National Curriculum Framework 2005 and National Curriculum Framework School Education 2023. The education system in India is envisaged to be more holistic and multidisciplinary in its approach through providing opportunity to study subjects like environmental education in Higher educational institutes (Ministry of Human Resource

and Development [MHRD], Government of India [GOI], 2020).

The data from ECO highlight that students lack environmental responsibility as they consider locus of control of responsibility to be external. This indicate that the sense of responsibility towards environment in students need to be focused. The other domain of analysis of environmental citizenship in this research was pro-environmental behaviour which was found to be external and guided by social norms and environmental narratives. The students seem to lack an intrinsic urge to make pro-environment choices. It was also observed that students do hold the virtue of environmental activism. They do engage in activities and make such decisions which promote activism but the chosen activism activities are facilitative in nature. They lack a personal initiative will in organising and volunteering for environmental activism.

This study acknowledge that Primary school students show dispositions towards the domains environmental citizenship but there is a need to promote this idea in much more rigorous manner. Students are future citizens and are instrumental in achieving the sustainable development goals. The mission like LiFE demand active citizens who are aware about their environmental rights and duties. The students as citizen must know their ability to bring the change in society by minute incremental activism by addressing the causes of environmental problems (Hadjichambis & Hadjichambi, 2020). There must be efforts by institutions for promoting the virtues of environmental citizenship in students to establish a positive relation with environment which may promote environmental sensitivity in them (Sharma, Sharma & Varish, 2022). These attempts in direction of promoting environmental citizenship and inculcating responsive environment behaviour (Shimray, 2016) will make our students more environmental conscious. This consciousness will result in a generation which will support circular economy and mark a shift from mindless utilization of resources to meaningful utilization by following lifestyle for environment.

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