



## **Attitudes of Secondary School Students towards Global Warming in Secondary Schools**

*Dr. Malathesha P.V.<sup>1</sup>, Bijayalaxmi. Samantaray<sup>2</sup>*

<sup>1</sup>G.V. & A.D.S.L. College of Education Ongole, Prakasam District A.P. E-mail.id: [balaramkotturu100@gmail.com](mailto:balaramkotturu100@gmail.com).

<sup>2</sup>M. Ed Student G.V. & A.D.S.L. College of Education Ongole, Prakasam District A.P.

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### **ABSTRACT**

The present study has been designed to study the Attitudes of Secondary School Students towards Global Warming in Secondary Schools. Various Indian and foreign studies were reviewed. Descriptive Survey method has been used in this study. The sample consists of 200 students studying in secondary schools. The investigator used stratified random sampling technique for selecting the sample. Questionnaire was constructed for the Students to find out the opinions on the Attitudes of Secondary School Students towards Global Warming in Secondary Schools. The data were analyzed using various statistical methods like mean, SD, 't' test and F-test were the statistical techniques used. The score obtained by different groups are compared across the variables like gender, age, social status, medium, management and locality. The results are discussed in light of previous research studied; suggestions and Recommendations for further research were also suggested.

**Key Words:** Global Warming Secondary School Students.

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### **GLOBAL WARMING:**

Earth's atmosphere contains certain gases called (mostly and carbon dioxide) which act to keep the lower layers of the atmosphere warmer that they otherwise would be without those gases. "Global Warming" is the expected slow, gradual warming of the lower layers of the Earth's lower atmosphere by the slowly increasing concentrations of man-made greenhouse gases, primarily carbon dioxide, and to a lesser extent methane. These gases trap, which is the "heat radiation" that cools the Earth. (In order for the Earth to remain at a constant temperature, the Earth must lose as much energy through infrared radiation as it gains from the sun. This concept is called energy balance.) The burning of fossil fuels, mainly petroleum and coal, produces carbon dioxide as one of the by-products. As of 2003, the concentration of carbon dioxide is over 50% higher than it was before the start of the industrial revolution in the late 1800's—which is when the burning of fossil fuels really took off.

**-- Dr. Roy W. Spencer**

How serious will global warming be? We don't know for sure, and there is much debate in the climate research community over this very question. The consensus opinion is that a warming of about 0.2 degrees Celsius (about 0.4 deg. F) every 10 years is expected for the next 100 years or so. The reason why there is so much uncertainty, though, is because weather acts to rid the surface of the earth of excess heat. The processes by which this happens are very complex, and usually involve water. For instance, [c](#)(on a whole) act to cool the earth. How clouds will change with global warming will be critical, as they could either amplify the warming or reduce it. The of water removes a huge amount of heat from the earth's surface, and this heat is deposited high in the atmosphere when rain clouds form. It is expected that "global warming" will be accompanied by small changes in rain systems. If those rain systems become more efficient at converting water vapor into [p](#), this would act to offset global warming. This is just one of the uncertainties in predicting how much global warming there will be. There are other uncertainties relating to possible changes in sea ice, snow cover, vegetation amount and how much of the extra carbon-dioxide will be absorbed by vegetation or by the ocean.

How much warming has there been so far? There seems to be pretty good evidence that globally-averaged temperatures have risen about 0.5 degrees Celsius (about 1 deg. F) in the last 100 years. But it is not known how much of this is due to man-made greenhouse gases, or to natural processes. The earth goes through natural climate fluctuations without any help from mankind. It is reasonable to assume, however, that some portion of the warming in the last century is man-made.

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### **Need and significance of the study:**

The world is severely facing the problem of Global warming due to the unprecedented increase in levels of green houses across the globe. As discussed above, no single cause cannot be said to be the major factor for this problem, but a complex combination of all the factors has lead to the increase in the

levels of temperature. Increase in highest levels of fossil fuels for the power sector and automobiles, uncontrolled deforestation, industrial growth, urbanisation, etc. are altogether responsible for this problem. Ultimately, it is man who is responsible for the dangerous situation in which the future of the mankind is at stake.

Unless, the present and future generations know about the ill effects of the global warming phenomena, the efforts taken by the governments and the NGOs will not reach them and give effective results. Unless, the citizens of the world are sensitized for these factors, there is no future for the new generations to come. It is a high time to find out the attitudes of the children studying in the schools so that they are aware of the situations, which they are going to face in the coming 10 to 15 years. This study is focussed to know their levels of understanding this global problem to sensitize them for the future.

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### Objectives of the study:

1. To study the attitude of students towards Global Warming in Secondary Schools.
2. To study the significant difference among the attitude of students based on their demographic variables i.e., gender, age, social status, medium, management and locality towards Global Warming in Secondary Schools.

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### Hypotheses of the present study

1. There is no significant difference between male and female category students attitudes towards Global Warming in Secondary Schools.
2. There is no significant difference among the students attitude based on their age towards Global Warming in Secondary Schools.
3. There is no significant difference among the students attitude based on their medium of instruction towards Global Warming in Secondary Schools.
4. There is no significant difference among the students attitude based on their school management towards Global Warming in Secondary Schools.
5. There is no significant difference among the students attitude based on their locality towards Global Warming in Secondary Schools.

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### Review of Related Literature:

[Adger, W. Neil, Brown, Katrina, Adger \(2008\)](#) in their review on “**Land Use and the Causes of Global Warming**”. Global Warming through the enhanced greenhouse effect is one of the major and most uncertain forces of global environmental change presently facing the earth. This book is a guide to the scientific and policy debate concerning the roles of agriculture, forestry and other activities leading to global warming. The influence of land use on the greenhouse effect is important, not only in terms of net emissions of greenhouse gases, but also in the potential to reduce emissions through changing land use policies. "Land Use and the Causes of Global Warming" reviews the global emissions of greenhouse gases from land use sources, highlighting the uncertainties in estimating both the magnitude of the fluxes and the scale of land use change. Policies of afforestation, policies to encourage the halting of deforestation and changing management practices in agriculture are all examined from the perspectives of feasibility, cost and equity. The authors illustrate how all land use policies are multi-objective but that the reduction of greenhouse gas emissions must be a key element in forestry and agriculture policy on a global basis. This is an invaluable book for all those in the climate change research community, environmental scientists, economists and social scientists in research institutions.

**Jerry Silver (2008)** studied on “**Global Warming and Climate Change Demystified**”. A non-heated discussion on global warming and climate change Interested in getting to the core of the reasons for the earth's changing climate? Want an accurate reading on the science behind global warming? Here's your gauge! This easy-to-follow guide offers a temperate view of this hot topic. Global Warming & Climate Change Demystified starts by looking at scientific data gathered from weather instruments, satellite telemetry, ice cores and coral sections that reveal how the earth's temperature is changing. The book goes on to examine the causes of climate change, including both natural processes and human-generated greenhouse gases. Finally, the consequences of global warming are discussed and a wide variety of viable solutions that can be implemented by individuals as well as society as a whole are presented. Complete with end-of-chapter quizzes and a final review to test your knowledge, this book will teach you the fundamentals of global warming and climate change in an unbiased and thorough manner.

**Ayu Deshiana, Ida Sriyanti and Ismet (2022)** studied on “High School Students Awareness and Attitudes Toward Climate Change”. Climate change is a tremendous threat to the environment and human beings. Students are among the younger generation who immediately feel the effects of climate change. The younger generation is expected to have the knowledge and a positive attitude toward the framework for climate change adaptation and mitigation. The objectives of this study describe awareness and attitudes concerning climate change held by 611 high school students in South Sumatra. The methods of this study employed qualitative research. The findings of this research indicated that 98.4% of students were aware of climate change. Additionally, more than 80% of students know climate change contributes to droughts, floods, declining water quality, and the spread of vector-borne illnesses such as dengue fever and malaria. 95.7 % of students have a positive attitude toward mitigating climate change.

### Design of the Study

The researcher followed the survey method of the descriptive research. For this investigation the questionnaire had been considered as a suitable tool for the collection of data. The questionnaire consisted of 40 statements as perceived by the Students.

### Reliability and Validity:

For the purpose of the present study the split- half method was adopted. The split-half reliability co-efficient for the attitude of students towards Global Warming in Secondary Schools as perceived by students was 0.86 and for the validity of the scale it is based on the content and construct validity.

### Administration of Tool:

The tool was administered among students, necessary instructions were given in filling the tool. All the respondents followed the instructions and filled the tool by reading the all the items carefully.

### Data Collection:

The investigator personally visited the sampled schools and administered the tool among the sampled respondents. The data collected through questionnaire and Interview schedule were used for analytical purposes.

### Statistical Techniques Used:

The statistical techniques used mainly for analytical purposes were means, standard deviations were used To study the significant differences in between the socio-economic variables, 't'-test and 'F'-test (ANOVA) have been used by the investigator with the help of Statistical Package for Social Sciences (SPSS).

**Table 1. showing the overall response of Students towards Global warming**

N	Minimum	Maximum	Percent	Mean	Std. Devi.
200	40	120	82.23	103.61	9.43

It is observed from the above table 1. the students are shown more positive response with respect to attitudes of students in Secondary Schools towards global warming. The mean percent is 82.23 and the mean value is found to be 103.61 respectively.

**Table 2. Significant difference among the perceptions of students based on their demographic variables towards Global warming in secondary schools.**

Variable	Category		Mean	Std. Dev.	t/F-value	p-value
Gender	Boy	100	100.53	8.55	4.88**	0.00
	Girl	100	106.69	9.29		
Age	13 Years	41	101.41	7.90	7.40**	0.00
	14 Years	107	102.44	8.40		
	15 Years	52	107.75	9.12		
Caste	OC	38	104.16	8.60	0.63 <sup>NS</sup>	0.36
	BC	113	104.12	7.65		
	SC	34	102.25	10.09		
	ST	15	102.00	7.65		
Medium	English	100	105.77	9.58	3.32**	0.00
	Telugu	100	101.45	8.80		
Management	Government	60	103.97	9.10	5.08**	0.00
	Municipality	40	100.10	8.75		
	Private Aided	35	103.29	7.92		
	Private Unaided	65	105.62	8.09		

There is no significant difference between the attitude of Students based on their caste towards Global Warming in Secondary School.

There is a significant difference among the Students attitude based on their gender towards Global Warming in Secondary School and girl category Students perceived high than that of the rest.

There is a significant difference among the Students attitude based on their age towards Global Warming in Secondary School and 15 years age group Students perceived high than that of the rest.

There is a significant difference among the perceptions of Students based on their medium of instruction towards Global Warming in Secondary School and English medium Students perceived high than that of the rest.

There is a significant difference among the perceptions of Students based on their School Management towards Global Warming in Secondary School and Private Unaided school Students perceived high than that of the rest.

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**Findings of the study:**

1. There is no significant difference between the attitude of Students based on their caste towards Global Warming in Secondary School.
2. There is a significant difference among the Students attitude based on their gender towards Global Warming in Secondary School and girl category Students perceived high than that of the rest.
3. There is a significant difference among the Students attitude based on their age towards Global Warming in Secondary School and 15 years age group Students perceived high than that of the rest.
4. There is a significant difference among the perceptions of Students based on their medium of instruction towards Global Warming in Secondary School and English medium Students perceived high than that of the rest.
5. There is a significant difference among the perceptions of Students based on their School Management towards Global Warming in Secondary School and Private Unaided school Students perceived high than that of the rest.

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**SUGGESTIONS:**

Since this study found to be a good sign of attitudinal levels in the students, an in depth study towards the other environmental issues, trends, activities, modified life styles due to environmental issues could be taken up. These studies could be from elementary to higher education and the influences of factors like subjects of study, parental education, place of living, influence of urbanisation and industrialisation and the local issues could be undertaken for further research.

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