



Student's attitude and knowledge towards solar energy and their uses

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Abstract

The purpose of this study is to find out the knowledge and attitude of undergraduate level science students about Solar energy and their uses. The sample selected for this study is group of 100 students from first year, second year and Final year classes of undergraduate level having Physics as major subject. Primary data collection was done through self developed questioner and interviews of students. The analysis of data revealed that first and second year students were found to have low level of knowledge about Solar energy and their uses. Nearly all responders know about some of the form of renewable energy sources, mainly solar energy, wind energy and hydro power energy. But very few know about other forms such as ocean energy, hydrogen energy, biomass energy and geothermal energy. It was found that knowledge and attitude of students who participated in this study did not differ according to gender. It is found that there is remarkable change in second year and Final years student's knowledge about renewable energy sources and their uses after studying it in Environmental studies (EVS).

Keywords: Knowledge, attitude, Solar Energy, Renewable energy sources.

Introduction

All the energy sources are generally derived from nature by one or other way. Coal and petroleum products are the commonly used energy sources. But as we all know that these products cannot use again and again. Renewable energy sources are those sources which can be used again and again. These sources can be used to convert their energy in to electricity. *'Renewable energy is energy that is collected from renewable sources, which naturally replenished on human time scale, such as sunlight, wind, rain tides, waves and geothermal heat.'* Renewable energy is the energy from source that are naturally replenishing but having limited flow. The consumption rate of available energy source is so large that they will soon be vanished. So scientific research is going on to create infrastructure that can convert renewable energy in to electricity or heat. There are different types of renewable energy sources available such as solar energy, wind energy, biomass energy, hydro power, hydrogen energy, ocean energy and geothermal energy. It is observed that people's knowledge and attitude not develop at a proper extent which needed. So for conservation of energy sources and conservation of environment it is necessary to focus on renewable energy sources and their uses especially solar energy. For this the purpose of this study is to find out the

knowledge and attitude of undergraduate level science students about solar energy and their uses.

Objective of the study

The main objective of the study was to measure knowledge and attitude of undergraduate level science students towards solar energy sources and their use. More specifically following are the objectives of the present study

To find student's knowledge about Renewable energy sources and their uses.

To find student's attitude towards Renewable energy sources and their uses.

Factors affecting student's knowledge about Renewable energy sources and their uses.

To find student's knowledge and attitude about Renewable energy sources and their uses after studying the contents from renewable sources.

Material and method

The purpose of present study was to study is to find out the knowledge and attitude of undergraduate level science students about renewable energy sources and their uses. Knowledge, attitude and factors affecting their knowledge of undergraduate level science students towards Renewable energy sources and their uses were studied. For this sample of 100 peoples of different sex, different classes were selected. The region which is selected for study is mainly restricted to Science under graduate level of first, second and Final year having Physics as major subject of Mahatma Gandhi College of Science, Gadchandur Tarkorpana Dist-Chandrapur, Maharashtra. Collection of data was done through self developed questioner and interviews of students. Self developed questioner is mainly consist of questions about knowledge of students about renewable energy sources ,Solar energy and their uses, Factors affecting their knowledge and students attitude towards renewable energy sources ,Solar energy and their uses. All primary data was collected with the help of questionnaires, interviews, group discussions and by observations. After processing data final conclusions are find out.

Results of the study

1) To find student's knowledge about Renewable energy sources, solar energy and their uses.

To find students knowledge about Renewable energy sources and their uses students were asked to rate the given set of questions with appropriate answer such as not informed , little informed and completely informed or agree and disagree. Students were asked to rate about each type of renewable energy source including solar energy, wind energy, biomass energy, hydro power, hydrogen energy, ocean energy and geothermal energy. Results show that, **a)** solar energy, wind energy and hydro power are the most commonly known form of renewable energy sources. 100 % responders rated to completely informed. Biomass energy is the second most known form of renewable energy source. 80 % responders rated to completely informed. Student's knowledge level about hydrogen energy, ocean energy and geothermal energy is very low.20 % responders rated to completely informed. **b)** Student's knowledge level about uses of Renewable energy sources is different for different type of Renewable energy sources. Student's knowledge level about method of use and different

applications of solar energy and hydro power is high as compared to other sources. Wind energy is on third place. Student's knowledge level is poor about method of use and different applications of hydrogen energy, ocean energy and geothermal energy.

2) Factors affecting student's knowledge about Renewable energy sources and their uses.

From the primary data collected from students it is observed that there are some factors which influence the student's knowledge about Renewable energy sources and their uses. a) The main factors are whether the student is from rural area or from town, use of printing media and electronic media etc. Contents in syllabus show major effect on the student's knowledge about Renewable energy sources and their uses. Gender of responder does not show any effect on their knowledge about Renewable energy sources and their uses. b) Second year student's knowledge level about renewable energy source and specially method of use of renewable energy source increases. This may helpful for environment conservation.

Conclusion

The purpose of this study is to find out the knowledge and attitude of undergraduate level science students about renewable energy sources and their uses. 100 students from first year and second year classes of undergraduate level from two sessions having Physics as major subject were selected as sample. Primary data collection was done through self developed questioner and interviews of students. From study it is found that nearly all responders know about some of the form of renewable energy sources, mainly solar energy, wind energy and hydro power energy. But very few know about other forms such as ocean energy, hydrogen energy, biomass energy and geothermal energy. Student's knowledge level about uses of Renewable energy sources is different for different type of Renewable energy sources. The main factors are whether the student is from rural area or from town, use of printing media and electronic media etc. Contents in syllabus show major effect on the student's knowledge about Renewable energy sources and their uses. It was found that knowledge and attitude of students who participated in this study did not differ according to gender. It is found that there is remarkable change in second year student's knowledge about renewable energy sources and their uses after studying the Environmental studies subject (EVS).

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