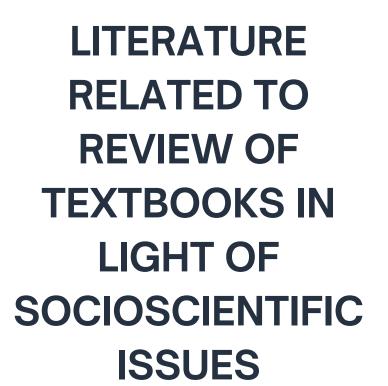
EpiSTEMe Submission 20

SOCIOSCIENTIFIC **ISSUES AND** SCIENCE EDUCATION

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76 TALES AT BEDTIME TOM THE SCOUT-CUB fetched the day before. Mr. Langham climbed up yesterday! You shouldn't be allowed to be in the it and gave a cry of disgust. Cubs. You had better resign at once." "You haven't cleaned the shelf at all! But here Tom was horrified. What would the Scoutis the payment I left for you to find. I thought master say? What would his mother say? And your mother would love to share it with you." the boys? He caught hold of Mr. Langham's arm. He brought down a large box of chocolates-but "Sir, listen! I like being a Cub. It's fun. I'm he didn't give them to Tom. Tom felt so ashamed sorry about those jobs. Please, please, sir, give me of himself that he couldn't even look at the old some more jobs to do and I'll do them well, man. without any payment at all-and I'll take a shil-"And now for the last payments," said Mr. ling out of my own money-box to pay into the Langham. "Come along. Did you put the new Scout's Fund." straw into the nesting-boxes?" "How am I to believe a deceitful boy like you?" "Yes, sir," said Tom. said Mr. Langham. "But I suppose you were too lazy to pull out the "I don't know. But please do, sir," begged Tom. old straw first?" said Mr. Langham. "I tell you, I want to be a Cub. I can't bear to be "Yes, sir," said Tom, in a very low voice indeed. turned out." "Yes-but the thing is-do you want to be a Mr. Langham took him into the hen-house. good Cub-and later on a first-class Scout?" said He pulled out both the new and old straw from the first box-and there lay a bright new sixpence! Mr. Langham. "That's what matters." "Yes, I do. And I will, if you'll give me a He did the same with the last box-and there were chance," said Tom. "I couldn't bear anyone to three new pennies, round and shining. Mr. Langham picked them up and put them into his hear about this-and how I didn't find any of the payments. Think of some more jobs for me, sir own pocket. -hard ones, long ones. I'll soon show you!" "You can go," he said to Tom. "I will tell the Scoutmaster why I gave you no payment. Boys Well, Mr. Langham did think of some-and like you shouldn't be Cubs and promise to do a they were hard and long ones-with no payment at all. good deed every day. Look at the bad ones you did LITERATURE





RESEARCH GAPS

INTRODUCTION

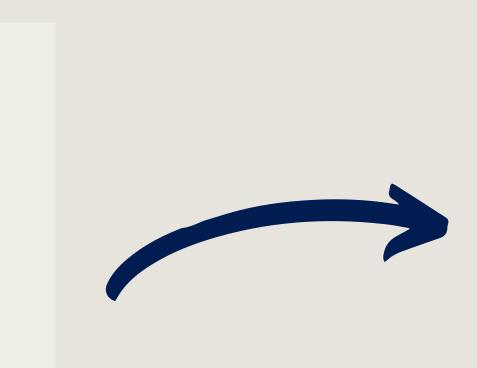


LITERATURE **RELATED TO STUDIES ON STUDENTS'** UNDERSTANDING



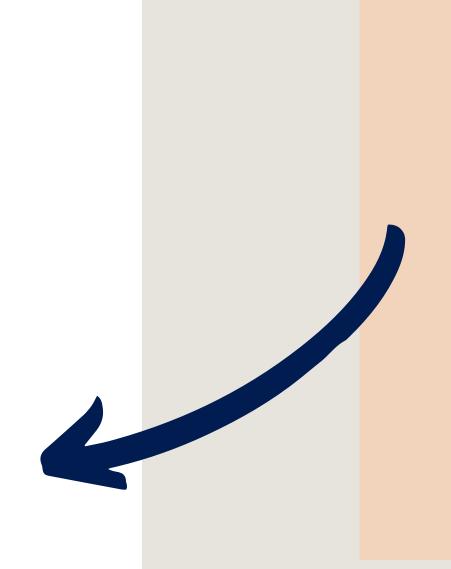
LITERATURE **REVIEW RELATED TO TEACHERS'** UNDERSTANDING **AND PERCEPTION** ABOUT SOCIOSCIENTIFIC ISSUES

















INTRODUCTION

age of 14.

- class.
- scrutinize it.





• Science education starts from class 3 itself (Environmental Science) and is mandatory till 10th

• Policy documents in the past have emphasized the need of cultivating scientific temper, critical thinking and scientific literacy among students and have mentioned these as the significant objectives of science education.

• The curriculum of science textbooks is too laden with information and gives little or no scope for students to discuss social and daily life problems. • Scientific literacy is considered to be one of the significant goals of science education worldwide which enables students to place science and technology in a social context and







• Indian constitution guarantees Right to Elementary Education (RTE, 2009) to every child until the

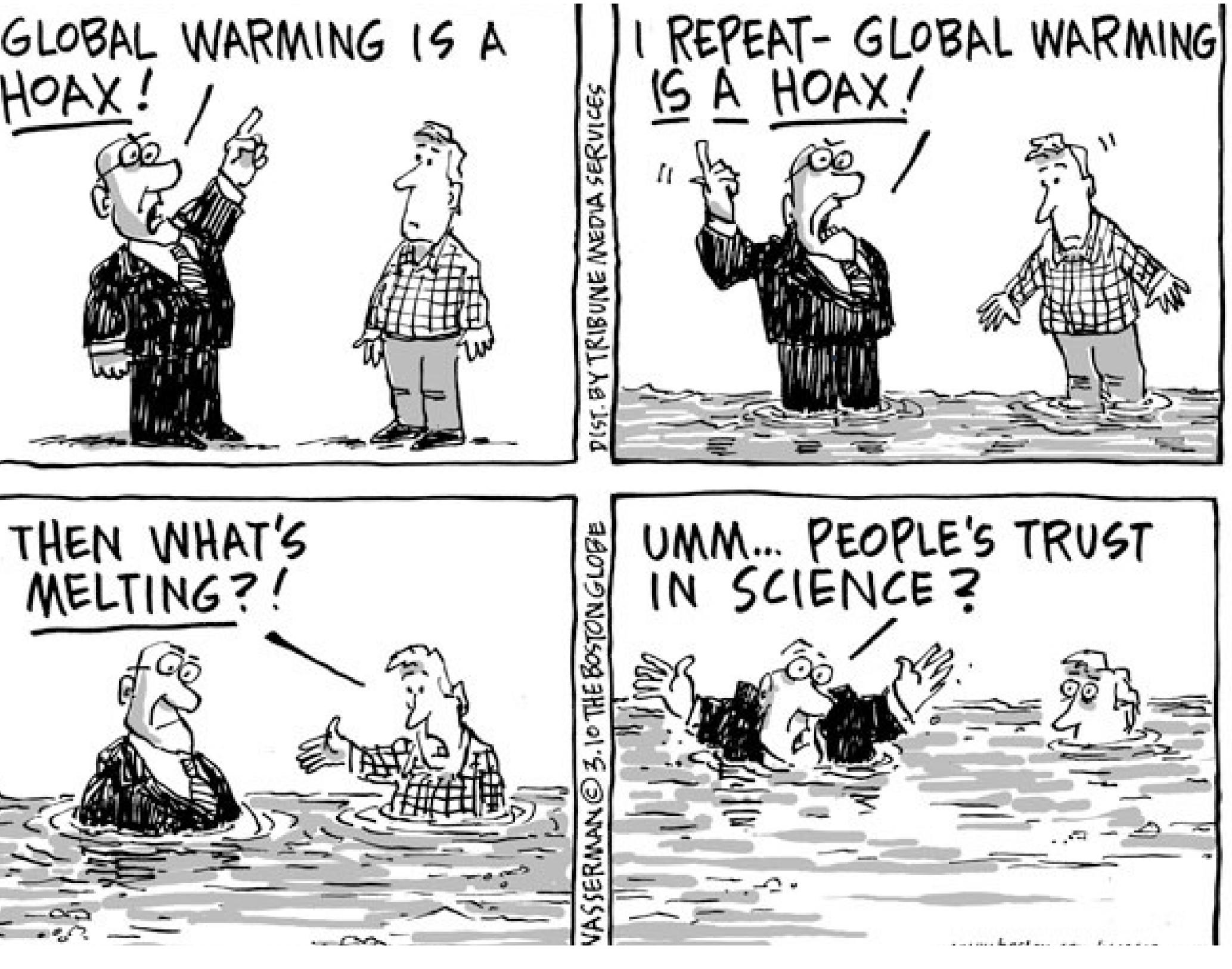




LITERATURE REVIEW

Scientific Literacy Hoolbrook and Rannikmae (2009) have put forward a detailed relevance based definition of scientific literacy for science education, "Developing an ability, to creatively utilize appropriate evidence-based scientific knowledge and skills, particularly with relevance for everyday life and a career, in solving personally challenging yet meaningful scientific problems as well as making, responsible socio-scientific decisions"

Socioscientific Issues: These issues have a basis in science, involve forming opinions and making personal and social choices, and are frequently reported in the media, have incomplete scientific evidence and incomplete reporting, have local, national and global dimensions, involve cost benefit analysis, consideration of sustainability and ethical reasoning.









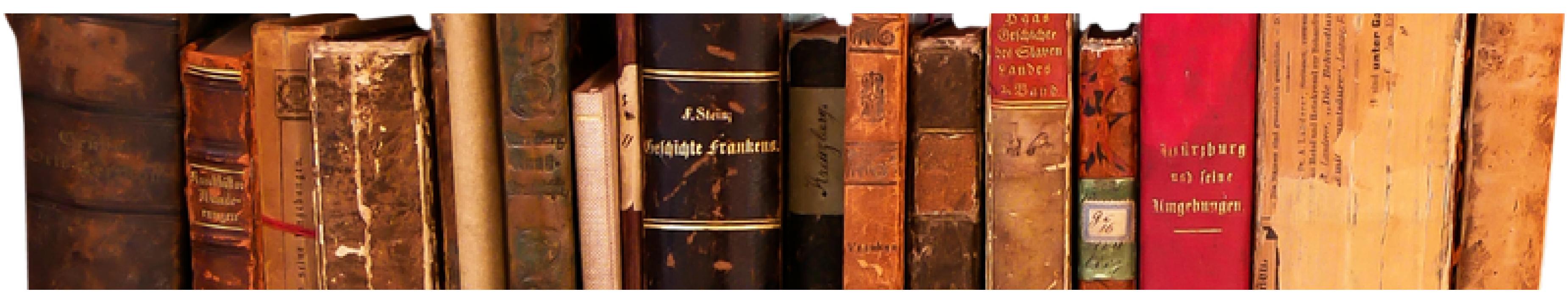
LITERATURE REVIEW

4

Teachers Liu et al. (2015) reported that many teachers did not feel themselves equipped with enough knowledge to teach climate change.

Students Students' conceptions about scientific concepts which have dominant space in textbooks and assessments only have been explored but the concepts/issues which are relevant to the students and have social and scientific implications in their lives have been ignored.

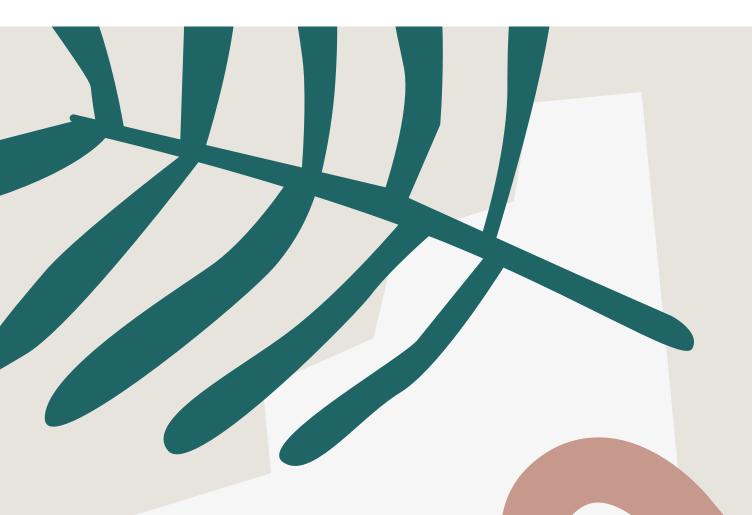
Textbooks Textbooks are one of the most significant teaching learning materials that are used most of the time especially in the Indian context. Genetic technology and climate change were the two most prominent issues (50% and 21% respectively). The space percentage for these two socioscientific issues was higher than the others. (Morris, 2014)











RESEARCH GAP

5





• All the studies done regarding such issues in European and American context • Looked into issues which are relevant for the society at the broader level. • Issues such as evolution, use of animals for medical testing and many other issues in biology education have been already explored multiple times. • This study proposes to look into the students' arguments, knowledge and beliefs about such issues which are personally relevant to them and their community. • Because there is a strong moral and ethical dilemma regarding these issues, it would be interesting to see whether they are willing to participate in a sociopolitical action for this issue.





Contextualisation of science concepts helps students in understanding concepts better as they get a chance to connect the local context with the global understanding. Similarly, socioscientific issues which are specific to the students' context can help in developing their scientific literacy and make them aware about the problems within their communities and this also opens a door for contemplation about the possible solutions. Hence, there is a need to look into the perceptions and understanding of science teachers, students from a specific community about socioscientific issues emerging from their own context and how such issues can be implemented or used in the science classrooms.



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