Science and Globalisation

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Globalisation has become a catchphrase in the vocabulary of policymakers, theorists, politicians, and entrepreneurs around the world. They all agree that to understand the world in which we live, it is important for citizens at all levels of our society to understand the impact of global trends on the social, cultural, and economic aspects of their lives. Douglas Bourn, Director of the Development Education Research Centre at the Institute of Education, University of London, suggests that science is a global human activity with ethical, social, and political dimensions. However, he notes that while there may be general consensus among social theorists and policymakers about the importance of understanding globalisation from a social perspective, there is less agreement among them about exactly what the term means from an educational perspective.

The Merriam Webster online dictionary suggests that globalisation, in its literal sense, is the process of transformation of local or regional things or phenomena into global or universal ones. Other sources say that the term has been used in certain spheres to describe the process by which the people of the world are unified into a single society and subsequently function together. In the local context, we should interrogate the significance and/or implications of globalisation in an educational context.

Educators—including science educators—are in unanimous agreement that apart from academic certification, an important aspect of science education is to help young people to recognise their roles and responsibilities as members of a local as well as a global community. The inclusion of a global dimension in teaching means that links can be made between local and global issues, so that what is delivered in the classroom setting is not only informed by local matters but is also juxtaposed against international issues and trends. In this context, therefore, it means that young people can be exposed to opportunities and situations that encourage them to examine their own values and attitudes in light of real global events and occurrences. In addition, global considerations in teaching have the potential to influence students to consider and to appreciate similarities and to respect differences among people from different places. Global considerations provide a platform to enable our students to understand the global context of their local lives. This will encourage them to develop the knowledge and skills to ward off prejudice and discrimination, and thereby equip themselves to play active and meaningful roles in the global community.

Issues such as poverty eradication, food and water for all, alternative energy sources, and environmental conservation and preservation are global challenges that will continue to raise concerns for planners and policymakers at all levels in the universal quest to achieve sustainable development. Ideas and solutions from all levels of the society will be needed to overcome these universal challenges. It is interesting to note that all of these topics are explored in some form in the current science syllabus documents that our teachers use to

inform instruction in their classrooms. Science students [and teachers], therefore, are not excluded from the human resource pool from which resourceful answers and proactive solutions are expected to emerge.

In this context, therefore, it becomes increasingly important for science teachers to project their instruction beyond student understanding of scientific knowledge and skills. They need to incorporate instructional activities in conjunction with appropriate stimulus materials into their classrooms. This will allow for the development of critical thinking skills by students, and the recognition that ethical and social considerations cannot be ignored in the science learning process. In this learning process, deliberate and structured instruction aimed at promoting attitudinal shifts, raising awareness, and awakening emotional concern for others in our world will be needed to develop and build this desired global mindset among out students. Furthermore, as articulated by Bourne, it is crucial that classroom instruction [science and other curriculum subjects] develop within our young people *competence* and *confidence*, and encourage them to develop or tap into collegial networks in order to properly arm themselves to secure their *place and influence* in an increasingly competitive and globalised society.

There is no doubt that science education without a global perspective will result in a narrow view of the subject, which will prevent young people from gaining a holistic appreciation of the relevance of science to them personally and to the global society of which they are a part. Science education, through its many practical applications, helps us to understand the world in which we live. For this reason, it cannot be delivered in isolation from global considerations.

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