Towards more effective learning for sustainability: reconceptualising science education

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Abstract

Environmental education can trace many of its roots to science education, although the relationship between the two has been contested. With the growth of Education for Sustainable Development in the past decade or so the potential relationship between environmental education and science education has strengthened with a growing recognition that an understanding of ecological sustainability is essential if we are to achieve sustainable development. This foregrounding of the importance of an environmental science education has been happening at the same time as student interest in studying traditional science subjects is declining and concerns are being raised about the static nature of science education practices. However, environmental education and Education for Sustainable Development also remain marginalised in most schools and education systems. It thus seems timely to reconsider the nature of both environmental education and science education, and reconceptualise science education to their mutual benefit. The science education that emerges from this reconceptualisation will not be like that currently practiced as, within an ESD context and given the changing nature of youth, a reconceptualised science/environmental education will also need to explicitly address economic and social sustainability as well as ecological sustainability and the significance of “Education for all”.

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Articles

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Learning for the future: Competences in Education for Sustainable Development. Holistic approach. The holistic approach includes three interrelated components: a) Integrative thinking; b) Inclusivity; c) Dealing with complexities. Exploring alternative futures leads to the identification of new pathways as an important step towards sustainable development. This process draws upon scientific evidence, unco-vers current beliefs and assumptions that underlie our choices and encourages creative thinking about a wide range of possibilities. Towards more effective learning for sustainability: Reconceptualising science education. Gough, A (2008), ‘Towards more effective learning for sustainability: Reconceptualising science education’, Transnational Curriculum Inquiry, vol. 5, no. 1, pp. 32-50. Document type: Journal Article. Environmental education can trace many of its roots to science education, although the relationship between the two has been contested. With the growth of Education for Sustainable Development in the past decade or so the potential relationship between environmental education and science education has strengthened with a growing recognition that an understanding of ecological sustainability is essential if we are to achieve sustainable development. Effective approaches for different ages. Effective approaches to connecting children to nature through arts education. Conclusion. The paper then provides some insights from research findings on the most effective approaches for engaging with different age groups. Finally, the paper reviews the role of participative, active arts education as a tool for facilitating and effectively connecting children and nature. Learning only happens if the subject-matter is perceived by the child or learner as having relevance to them. Effective environmental education programmes need to be personally relevant to the everyday lives of children and youth, and what is in their ‘own backyard’. It is important that programmes are directly related to the local context and give learners a chance to “