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## Exploring the Use of Schoolgrounds for the Integration of Environmental and Sustainability Education in Natural and Social Sciences Pedagogy: A Case Study

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Abstract: Background of the study: The benefits derived from Environmental and Sustainability Education (ESE) go beyond obtaining knowledge about the environment and the impact of human beings on the environment. Hence, it is sensible to expose learners to various resources that could enable meaningful environment-inclined pedagogy. The schoolgrounds, where they are utilised to promote ESE, benefit holistic learner development. However, empirical evidence, globally, suggests that young children's contact with nature is declining due to urbanization, safety concerns by parents/guardians, and greater dependency on technology. Modern children spend much time on videogames and social media with very little time in the natural environment. Furthermore, national education departments in numerous countries have made tangible efforts to embed environmental and place-based learning to their school curricula. South Africa is one of those countries whose national school education curriculum advocates for ESE in pedagogy. Nevertheless, there is paucity of research conducted in South Africa on schoolgrounds as potential enablers of ESE and tools to foster a connection between youngsters and the natural environment. Accordingly, this study was essential as it seeks to determine the extent to which environmental learning is accommodated in pedagogy. Significantly, it investigates efforts made to use schoolgrounds for pedagogical purposes to connect children with the natural environment. Therefore, this study was conducted to investigate the accessibility and use of schoolgrounds for environment-inclined pedagogy in Natural and Social Sciences in two schools located in the Mpumalanga Province of South Africa. It tries to answer the question: To what extent are schoolgrounds used to promote environmental and sustainability education in the selected schools? The sub-questions: How do teachers and learners perceive the use of schoolgrounds for environmental and sustainability education activities? How does the organization of schoolgrounds offer opportunities for environmental education activities and accessibility for learners? Research method: This qualitative-interpretive case study used purposive and convenient sampling for participant selection. Forty-six respondents: 40 learners (twenty grade 7 learners per school), 2 school principals and 4 grade 7 participated in this study. Data collection tools were observations, interviews, audio-visual recordings and questionnaires while data analysis was done thematically. Major findings: The findings of the study point to: The lack of teacher training and infrastructure in the schoolgrounds and, no administrative support. Unclear curriculum guidelines on the use of schoolgrounds for ESE. The availability various elements in the schoolgrounds that could aid ESE activities. Learners denied access to certain parts of the schoolgrounds. Lack of time and curriculum demands constrain teachers from using schoolgrounds.

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