

THE IMPACT OF SMART FARMING TECHNOLOGIES ON THE AGRICULTURAL EDUCATION CURRICULUM: CURRICULUM INNOVATIONS AND IMPLICATIONS FOR SUSTAINABLE PRACTICE

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Abstract

This paper examines the effects on environmentally friendly practices of integrating smart farming technologies into agriculture education. The use of smart farming technology has the potential to transform traditional agricultural methods while enhancing productivity, more efficiently using resources, and preserving the environment. Students are given the information, abilities, and competences required to seek future employment in the agricultural business through the use of these technologies in the classroom. The paper identifies the impact of smart agricultural technology on theoretical frameworks, curricular conceptions, and design principles relevant to the integration. In order to improve awareness of ecological stewardship, resource conservation, and sustainable agricultural practices backed by smart farming technology, it examines how to include sustainability education into the curriculum. It is important to emphasize student engagement, motivation, and skill development while incorporating smart agriculture technology. Through experiential learning and real-world applications, which are good teaching strategies, students may actively participate in practical experiences, critical thinking, problem-solving, and decision-making. The development of skills like digital, literacy, data interpretation, collaboration, and flexibility is stressed with an emphasis on how important they are for future employment in the agriculture industry. The challenges and problems associated with curricular integration are emphasized, along with potential solutions. These remedies include encouraging equitable access to technology, providing opportunities for educators to further their careers, and establishing partnerships with industry and community organizations. Through collaborating, supporting educators, implementing cutting-edge curriculum, promoting justice and access, and fostering innovation, the next generation of agricultural professionals may embrace sustainable methods and address global issues.

Keywords: Smart farming technologies, Agricultural education, Curriculum integration, Sustainable practices, Student engagement, Skills development, Equity in education.