

Advancing Open Science Globally: Lessons from Erasmus+ Initiatives in Africa and Asia

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Abstract

Open Science (OS) is increasingly recognised as a transformative approach to research and innovation, fostering transparency, accessibility, collaboration, and inclusivity throughout the complete research lifecycle.

By facilitating open access to articles, data, methodology, and instructional tools, OS improves the reliability, reproducibility, and social impact of scientific information, while promoting evidence-based decision-making and global knowledge exchange.

Effective implementation of Open Science requires not only technological infrastructure but also significant institutional, cultural, and regulatory shifts. Key challenges include balancing openness with intellectual property protection, ensuring data privacy, and establishing appropriate licensing frameworks that support both accessibility and responsible use. By boosting awareness, encouraging cooperation, and facilitating involvement in global research networks, OS also offers significant opportunity for capacity building, especially for early-career researchers.

Three Erasmus+ capacity-building projects offer useful insights into OS implementation. The FOSTER project (Kenya, Tanzania) focuses on creating training frameworks and enhancing institutional capacity for the implementation of Open Science. Open access policy, repositories, and regional collaboration are all supported by the OPEN-ASIA project (India, Malaysia). The OSCAR initiative (Botswana, Zambia) encourages data

management in accordance with international standards and improves research infrastructures.

These examples show that infrastructure, talent development, governance, and international cooperation should all be integrated for Open Science adoption to be successful, establishing OS as a major force behind more impactful and inclusive research systems.

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