**////Title: Promoting Global Education and Sustainable Development Through Animations**

**////Standfirst:**

One of the main priorities of the United Nations and other international organisations is to encourage the sustainable economic, social, and environmental development of all countries worldwide. Education plays a crucial role in these efforts, as it allows individuals to become more knowledgeable about matters of public interest, while potentially improving their life skills. Researchers at Purdue University and Michigan State University have created Scientific Animations Without Borders, a platform that produces and disseminates educational animations in numerous languages and dialects. A recent paper authored by Dr María Angeles Rodriguez-Domenech of the University of Castilla-La Mancha in Spain discusses the potential of this innovative platform as a tool for sustainable development.

**////Main text:**

The term ‘sustainable development’ refers to the economic and social development of countries, employing responsible strategies that preserve the environment and natural resources. Over the past few decades, the United Nations and other international organisations have delineated several benchmarks and objectives for sustainable development.

In its 2030 Agenda for Sustainable Development, the United Nations outlined 17 sustainable goals for the next 15 years. This agenda particularly emphasises the need for global initiatives aimed at facilitating the transition to sustainable societies, where people work together to preserve the environment and protect natural resources.

Education plays a crucial role in sustainable development, particularly when it comes to empowering people by teaching them skills and strategies that allow them to improve their livelihoods in more sustainable ways. People with low-literacy levels and in developing countries, however, do not have the same access to educational resources as wealthier individuals living in developed countries.

In addition, not all people can afford to stop working to focus on learning, while projects aimed at educating communities in developing countries often require substantial funding and infrastructures. In recent years, some researchers have thus been exploring the potential of alternative educational tools that can be easily accessed by people with low-literacy levels and from underserved communities.

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To make education accessible to more people worldwide, Dr Julia Bello-Bravo, Dr Barry Pittendrigh [Pitt-uhn-dree], and other researchers at Michigan State University and Purdue University created a platform called Scientific Animations Without Borders – or ‘SAWBO’ – which produces and disseminates scientifically accurate animated videos in countless different languages and dialects. As more and more people in developing countries are gaining access to mobile technologies, the researchers decided to focus their efforts on creating reliable educational content that can be accessed online and easily viewed on smartphones.

Launched in 2011, SAWBO’s key mission is to provide opportunities for people in developing nations or with low-literacy levels to easily learn about topics including sustainability, health, women empowerment, and agriculture.

The animated videos created by the SAWBO team are not only designed to be used by local teachers and educators; they are also published on YouTube and can be accessed by individual learners on their smartphones, tablets and laptops.

This means that, for instance, farmers living in different parts of Africa could learn about more sustainable ways of growing or storing crops, simply by watching a short animation in their local dialect or language. Moreover, people with low-literacy levels living in areas affected by deadly viruses could watch videos to learn about simple ways to protect themselves and reduce the risk of infection.

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The videos created by the SAWBO team are designed to be both scientifically accurate and aesthetically appealing. This means that they offer reliable and valuable information to viewers, while also keeping them engaged and entertained.

Before they are posted on YouTube and on the SAWBO website, the videos undergo a strict four-step review process, to ensure that all the information contained in them is accurate and easy to understand.

In the first step, the SAWBO team comes up with a concept for the animation, focusing on a topic or technique that can have a positive effect on communities. Next, they develop the initial script for the animation, bringing in new experts if necessary. In the third step, the team outlines the visual narrative for the animation, and develops ways to convey the concept or technique to the target community in a culturally appropriate way. In the final stage, the team produces the animation, ensuring that it is playable on smartphones, and downloadable anywhere with Internet access.

The voiceovers for the animations have been translated by volunteer translators into over 250 local languages and dialects from around the world.

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While researchers, teachers, and policymakers can all contribute significantly to sustainable development initiatives, educating local communities is a very important factor for the success of these efforts. The free, informative, multi-lingual, and easily accessible animated videos created by SAWBO offer an important educational resource that could be far-reaching and highly valuable for people who would otherwise have little or no access to education.

As many of the videos focus on topics related to sustainability, the SAWBO platform could play an important role in promoting sustainable development. A recent paper authored by Dr María Angeles Rodriguez-Domenech of the University of Castilla-La Mancha in Spain, focused on how SAWBO’s approach addresses many of the United Nations17 sustainable development goals and aligns with the global effort to develop educational approaches that are not only economically sustainable, but also socially and environmentally sustainable.

As a project, SAWBO embodies a model of sustainability education practice adaptable to different methodologies across a variety of spaces and educational levels, and is itself also methodologically sustainable.

SAWBO animations that are currently available cover at least 12 out of 17 of the topics outlined by the United Nations in its Sustainable Development Agenda, including poverty, gender equality, consumption, water preservation, and health. Rodriguez-Domenech’s paper outlines the potential for SAWBO’s approach to cost-effectively support and scale the sustainable development goals outlined by the United Nations.

In the future, the pool of sustainable development topics covered by SAWBO will be broadened further, as the researchers plan to continue producing scientifically accurate animations on numerous important topics. Ultimately, the researchers hope to reach as many people as possible, offering them the opportunity to easily acquire new valuable knowledge and skills.

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Currently, the team is scaling up the platform, inclusive of a SAWBO smartphone application. This app allows learners to browse through the full library of SAWBO animated videos, filtering them based on the topics that interest them, the languages they speak, or the countries they live in.

In addition, the researchers plan to continue expanding the number of languages that SAWBO animations are available in, to reach as many people as possible.

As smartphones become increasingly widespread throughout the world, apps and media platforms that can be accessed on mobile devices could prove to be incredibly valuable for educating underserved communities and people with low-literacy levels. SAWBO and other smartphone-based tools could thus greatly contribute to the sustainable development of many regions worldwide, as they allow people from all walks of life to learn how they can improve their lives and those of others.

In contrast with conventional development, sustainable development entails a delicate balance between economic profitability, environmental protection, and social equity. The SAWBO project is perfectly aligned with these three goals, as it provides a far more affordable alternative to conventional education-related interventions, which could significantly increase people’s knowledge of scientific topics, empowering them to make more informed and responsible choices in their everyday life.

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This SciPod is a summary of the paper ‘Scientific Animations Without Borders (SAWBO): an innovative strategy for promoting education for sustainable development’, from *Sustainability Science.* [doi.org/10.1007/s11625-018-0624-8](https://doi.org/10.1007/s11625-018-0624-8)

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