

Physics is crucial in the 21st century, explaining natural phenomena, driving technological advancements (smartphones, lasers), and improving daily life (energy, medicine, communication). It underpins other sciences and fosters problem-solving skills. However, physics education faces challenges: abstract concepts, limited practical experiments, and the rapid pace of technological change hinder student learning. Teachers struggle with curriculum pressure, resource scarcity, and the need for continuous training to address diverse student needs. Overcoming these challenges requires innovative teaching, technological resources, and ongoing teacher development. AI is transforming education, offering personalized learning and teacher support. Several studies reveal varying levels of AI awareness and application in education, highlighting the need for increased infrastructure, resources, and teacher training in AI integration, particularly in science curricula, to address identified gaps and ethical considerations. Tools like Magic School AI offer time-saving features for lesson planning, material creation, and assessment design, potentially mitigating some educational challenges.