

# Enhancing Transparency in Educational AI: The Role of Explainable AI in Student and Teacher Engagement

## Introduction

Artificial Intelligence (AI) has the potential to revolutionize education by offering personalized learning experiences and streamlining administrative tasks. However, the opaque nature of AI decisions can create trust issues and hinder assessments of fairness and bias. Explainable AI (XAI) addresses these challenges by making AI systems more transparent and their decisions understandable to users.

## The Challenge

Despite its promise, the implementation of XAI in education is inconsistent and lacks a standardized approach. This can lead to underutilization of AI's capabilities and perpetuate mistrust among educators, students, and administrators.

## The Solution: The SHARE Framework

To address these issues, we introduce the SHARE Framework, a structured approach tailored specifically for educational AI applications. The framework focuses on five key components:

### 1. System Transparency by Design

- Choose interpretable AI models.
- Implement transparent processes.
- Use clear and accessible user interfaces.
- Maintain detailed documentation and visualization tools.

### 2. Human-Centric Explanations

- Tailor explanations to different stakeholders (students, teachers, administrators).
- Develop interactive tools for user queries.
- Incorporate feedback mechanisms to improve explanations continuously.

### 3. Audit Trails and Documentation

- Log all data inputs, decision-making processes, and user interactions.
- Use version control for AI models and data.
- Ensure compliance with regulatory standards through thorough documentation.

### 4. Responsible Collaborative Development

- Engage diverse stakeholders in the AI development process.
- Adhere to ethical guidelines and standards.
- Foster communication and collaboration among all parties involved.

### 5. Evaluation and Testing

- Define performance and fairness metrics.
- Conduct user testing and pilot programs.
- Implement continuous monitoring and improvement processes.

## Benefits of the SHARE Framework

- **Enhanced Trust:** By making AI decisions transparent and understandable, the SHARE Framework builds trust among users.
- **Regulatory Compliance:** Ensures adherence to data privacy laws and ethical standards.
- **Improved Educational Outcomes:** Provides educators with the tools to better understand and utilize AI, leading to more effective teaching and learning.
- **Ethical and Fair AI Use:** Helps identify and mitigate biases, ensuring AI operates fairly for all students.

### **Implementation**

The SHARE Framework includes a detailed playbook to guide educational institutions through its implementation. This playbook covers preparation, planning, system design, human-centric explanations, audit trails, responsible development, and evaluation.

### **Sustainability and Scalability**

To ensure long-term impact, the SHARE Framework is designed to be adaptable and scalable. Key strategies include:

- Regular updates and reviews.
- Ongoing training and support.
- Establishing a community of practice.
- Modular approach for phased implementation.
- Partnerships and collaborations for broader reach.
- Continuous improvement through stakeholder feedback.

### **Conclusion**

The SHARE Framework offers a comprehensive solution to enhance transparency and trust in educational AI systems. By adopting this framework, educational institutions can ensure their AI tools are not only technically proficient but also aligned with ethical standards and educational values.