# Article information:

Sustainability | Free Full-Text | User-Centered Software Design: User Interface Redesign for Blockly&ndash;Electron, Artificial Intelligence Educational Software for Primary and Secondary Schools  
<https://www.mdpi.com/2071-1050/15/6/5232>

# Article summary:

1. Artificial intelligence (AI) is a key technology in education, with applications in various areas and the potential to solve teaching and learning challenges.

2. Computational thinking, including programming skills and abstract thinking logic, is crucial for AI education.

3. User-centered design (UCD) is important for developing AI educational software, with usability being a key factor in creating a positive user experience.

# Article rating:

Appears strongly imbalanced: The article is written in a biased or one-sided way, and the information it provides is not trustworthy enough to be considered a reliable source. You should consult other sources to find reliable information on the presented issues.

# Article analysis:

The article titled "User-Centered Software Design: User Interface Redesign for Blockly–Electron, Artificial Intelligence Educational Software for Primary and Secondary Schools" discusses the importance of user-centered design in the development of educational software for AI education. While the article provides some valuable insights into the topic, there are several areas where it lacks depth and fails to provide a balanced perspective.

One potential bias in the article is its focus on the positive aspects of AI in education without adequately addressing potential risks and challenges. The article mentions that AI can solve long-standing challenges in teaching and learning but does not delve into any potential negative consequences or ethical considerations associated with the use of AI in education. This one-sided reporting could give readers a skewed view of the topic.

Additionally, the article relies heavily on citations from MDPI, a publisher known for its low-quality peer review process. This raises concerns about the reliability and credibility of the sources used to support the claims made in the article. It would have been more robust if the author had included citations from reputable journals or research institutions.

Furthermore, while the article briefly mentions user experience (UX) as an important aspect of user-centered design, it does not provide a comprehensive analysis of UX principles or methodologies. The discussion on usability is limited to mentioning ISO 9241-11:2018's definition without exploring other established frameworks or evaluation methods. This lack of depth undermines the credibility of the article's claims regarding usability assessment.

The article also fails to address potential counterarguments or alternative perspectives on user-centered design. It presents UCD as a universally accepted methodology without acknowledging any criticisms or limitations. A more balanced approach would have included a discussion of different design approaches and their respective strengths and weaknesses.

Moreover, there is a lack of evidence provided to support some of the claims made in the article. For example, when discussing graphical programming languages like Scratch and Blockly–Electron, the author states that they have higher efficacy and can significantly reduce learning costs. However, no empirical studies or data are presented to support these claims. Including relevant research findings would have strengthened the article's arguments.

In terms of promotional content, the article focuses heavily on Blockly–Electron as an example of user-centered design in AI educational software. While it is important to provide concrete examples, the article could be seen as promoting Blockly–Electron without adequately considering other similar tools or approaches.

Overall, the article lacks depth, balance, and supporting evidence in its discussion of user-centered design for AI educational software. It would benefit from a more critical analysis of potential biases, a broader exploration of alternative perspectives, and a stronger reliance on reputable sources.

# Topics for further research:

* Ethical considerations of AI in education
* Risks and challenges of AI in educational software
* Criticisms of user-centered design in software development
* Alternative design approaches for educational software
* Empirical studies on the efficacy of graphical programming languages in education
* Reputable sources on user experience (UX) principles and methodologies

# Report location:

<https://www.fullpicture.app/item/33103fb4f0f8f72b2f5fdc160a32b810>