

Conversational AI in Education

Category: Artificial Intelligence in Education

Conversational AI in education refers to systems that interact with learners or educators through successive turns in natural language, whether written or spoken. The category includes educational chatbots, virtual assistants and dialogue-based tutors, using rule-based, retrieval-based or generative methods.

The conversational form can make support feel accessible and responsive, but human-like language should not be mistaken for human understanding. Design must connect the dialogue to a defensible educational role and communicate the system's identity, limits and use of data ([Wollny et al., 2021](#)).

Design Considerations

1. **Role:** Define whether the system informs, questions, practises, coaches or routes to human support.
2. **Dialogue:** Design turns that promote explanation and reflection rather than dependence or guessing.
3. **Grounding:** Constrain responses to appropriate sources and make uncertainty visible.
4. **Inclusion:** Test language, accessibility, tone and performance across relevant users.
5. **Escalation:** Provide clear routes to an educator or service when the system reaches its limits.

Examples in Practice

A library assistant can ask clarifying questions about a student's topic and suggest suitable databases. It states that it cannot judge source quality for the assignment, links to verified guidance and offers librarian contact when the request is specialised or the student remains uncertain.

Why It Matters

Conversation can lower barriers to asking questions and provide support outside scheduled hours. The same interface can encourage over-trust, disclose sensitive information or produce plausible errors, so transparency, grounding and human support are central educational requirements. Users should always know when and why they are interacting with an automated system ([Okonkwo & Ade-Ibijola, 2021](#)).

Further Reading

6. Wollny, S., et al. (2021). [Are we there yet? A systematic literature review on chatbots in education](#). *Frontiers in Artificial Intelligence*, 4, 654924.
7. Okonkwo, C. W., & Ade-Ibijola, A. (2021). [Chatbots applications in education: A systematic review](#). *Computers and Education: Artificial Intelligence*, 2, 100033.
8. Miao, F., & Holmes, W. (2023). [Guidance for generative AI in education and research](#). UNESCO.

Related Terms: Educational Chatbots | Intelligent Tutoring Systems | Generative AI | Dialogue-Based Learning