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# Preparing Pre-Service Teachers for AI-Mediated Curriculum Design: From Theory to Practice

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## Abstract

Aligned with the OECD Teaching Compass (2025), which emphasizes preparing teachers as agents of curriculum change, this qualitative study examines how 15 Israeli pre-service teachers (PSTs) utilized ChatGPT to apply constructivist theory in a curriculum design project that formed part of a core college-based course titled "Issues in Curriculum Design." Adopting a qualitative method, we analyzed the PSTs-Chatbot interactions, as well as their final curriculum designs. The findings reveal three main ways in which PSTs leveraged the chatbot to translate theory into practice: (a) simplifying theory, (b) applying theory, and (c) visualizing theory. The study illustrates the iterative process of refining prompts using the professional curricular language introduced in the course, combined with engagement in creative and critical thinking, which supported their ability to make theoretical concepts actionable. When interacting with ChatGPT throughout their project, PSTs considered multiple factors related to teacher agency, including ideation, inspiration, creativity, reliability, and the tool's limited capacity for personalization. These considerations reflect a balanced stance toward generative AI, recognizing its pedagogical potential while remaining attentive to its risks and limitations. The study concludes that teacher educators should explicitly address how generative AI can support theoretical understanding, curricular decision-making, and professional judgment, while also ensuring that PSTs understand the distinction between acting as "AI-generated curriculum deliverers" and as "curriculum makers". Teacher educators should guide PSTs to evaluate and adapt AI-generated curriculum to their own students' unique needs and learning contexts.

**Keywords:** curriculum design; generative-AI; OECD Teaching Compass; student teachers; teacher education