Chapter 13
Safeguarding Educational Innovations Amid AI Disruptions:
A Reassessment of Patenting for Sustained Intellectual Property Protection

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ABSTRACT

In an era marked by rapid technological advancement, protecting the intellectual property (IP) of educational innovations has become more critical than ever. This chapter examines the intersection of educational innovation, artificial intelligence (AI), and IP protection. Patents, which safeguard the technical and functional aspects of inventions, are crucial for protecting these advancements amid rapid technological disruptions. As discussed in the chapter, several challenges are posed by AI in generating and managing IP, including the need to redefine inventorship, address skill obsolescence, and ensure

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equitable IP frameworks. Despite the importance of addressing these issues to foster innovation, they remain underexplored in the existing literature. Therefore, this chapter calls for a reassessment of existing legal and procedural frameworks to adapt to the evolving IP landscape and sustain the integrity of educational innovations. Overall, this chapter aims to contribute to the development of robust strategies for safeguarding educational innovations in an AI-driven era.

INTRODUCTION

As a social institution, education champions innovation to address the demands of a rapidly changing globalized world (Segarra et al., 2024; Serdyukov, 2017). The need for quality improvement in the curriculum and the desire to produce students with 21st-century competency skills have made innovation the core emphasis in the educational context (Acut et al., 2025; Fuad et al., 2020). As posited by Garcia (2023), school cultures that cultivate innovation should be consequently developed and encouraged extensively. At its core, educational innovation thrives on the ability to formulate and integrate new ideas, tools, and methodologies into teaching and learning. For instance, the integration of technology in classrooms has spurred the development of interactive tools such as gamified learning platforms (Mustafa et al., 2022), personalized education systems (Mishra et al., 2024), serious games (Arif et al., 2025), virtual reality simulations (Petil et al., 2025), machine learning (Maaliw et al., 2023), knowledge-based system (Garcia et al., 2021), and even artificial intelligence (AI) technologies (Hasanah et al., 2025). Through such innovations, educational institutions create assets with significant societal and economic value. These educational assets are intellectual capital that embodies creativity, research, and innovation. They have the potential to reshape industries, create new revenue streams, and establish competitive advantages for institutions. Therefore, these educational innovations often qualify as intellectual property (IP), including patents for technological advancements, copyrights for curriculum designs, and trademarks for branded learning tools.

Protecting assets through IP frameworks is essential to ensure their creators—whether they are educators, researchers, or institutions—retain the rights and benefits derived from their use. Robust IP protection not only incentivizes innovation but also safeguards against unauthorized replication or misuse. However, the IP landscape is evolving with the rise of *artificial inventors*, with advanced AI systems no longer just tools to support human creativity (Garcia, 2024). These AI systems are increasingly capable of producing outputs that resemble those traditionally considered IP, such as algorithms, educational tools, and creative content. While debates are ongoing about whether such machine-generated creations meet the legal and conceptual criteria for IP, their potential to generate valuable innovations cannot be ignored. Some legal experts (e.g., Picht & Thouvenin, 2023) have even argued that the law should be amended to allow the designation of AI systems as inventors to provide clarity in ownership disputes. With the intensifying AI disruptions, a cautious reassessment of IP frameworks is crucial to ensuring fairness and protecting educational innovations.