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The Next Game Changer: 3-D Printed Musical Instruments

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Abstract : In an era marked by rapid technological innovation, the classical instrument industry nonetheless has not seen significant change. Is this a matter of stubborn traditionalism, or do old, conventional instruments really sound better? Because of the widespread use of 3-D printing, it seems feasible to produce modern, 3-D printed instruments that adhere to the basic conventions of standard construction. This study aimed to design and create a practical, effective 3-D printed acoustic violin. A cost-benefit analysis of materials and design is presented in addition to a report on sound tests in which a pool of professional musicians compared the traditional violin to its synthetic counterpart with regard to acoustic properties. With a low-cost yet functional instrument, musicians of all levels would be able to afford instruments with much greater ease; the present study thus hopes to contribute to efforts to increase the accessibility of classical music education.

Keywords : acoustic musical instrument, classical musical education, low-cost, 3-D printing
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