

Evaluation of Interactive College Piano Teaching's Effect Based on Artificial Intelligence Technology

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ABSTRACT

In recent years, with the economic development of various countries, education has also made great leaps, and piano teaching has been popularized and promoted in various universities. Pianos are also put into use in universities through normal channels. According to the survey, there are certain drawbacks in the teaching process of piano, which hinder the teaching effect to a great extent. In order to better adapt to the interactive teaching mode, this paper takes the flipped classroom in piano teaching as an example to conduct a systematic study based on the method of artificial intelligence. This paper introduces three typical artificial intelligence technologies and analyzes the three evaluative indicators corresponding to the effect of piano interactive teaching. The analysis results show that the prediction effect based on fuzzy neural inference system is the best. In addition, the three-dimensional display of the prediction data shows that the prediction effect obtained by artificial intelligence shows a strong consistency with the actual evaluation effect.

KEYWORDS

Artificial Intelligence Technology, Evaluative Indicators, Interactive Teaching Mode, Piano Teaching, Psychological Adjustment

INTRODUCTION

The quality of life and public appreciation levels have experienced significant improvements, manifesting both material and the spiritual prosperity within society (Shu, 2018). Under this premise, there has been a growing focus from the government and other sectors of society on the cultivation of artistic and cultural talents in recent years. The traditional emphasis on individual performances has evolved to require more complex and comprehensive piano talents. Therefore, universities worldwide need to adopt diverse educational models to foster innovation in music education, especially in piano studies. The adoption of this versatile training mode can cultivate piano talents that align with social requirements and are complex skills (Kapliyenko-Iliuk, 2018).

Piano teaching in colleges and universities plays an important role in developing students' all-round development (Yan, 2019). In Chinese universities, piano teaching mainly relies on practice and experimentation to improve the effectiveness of teaching. However, the pursuit of innovative

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models will present obstacles. Overcoming the challenges will require that schools, teachers, and students work together to reduce resistance. Only through such efforts can students elevate their musical literacy in piano.

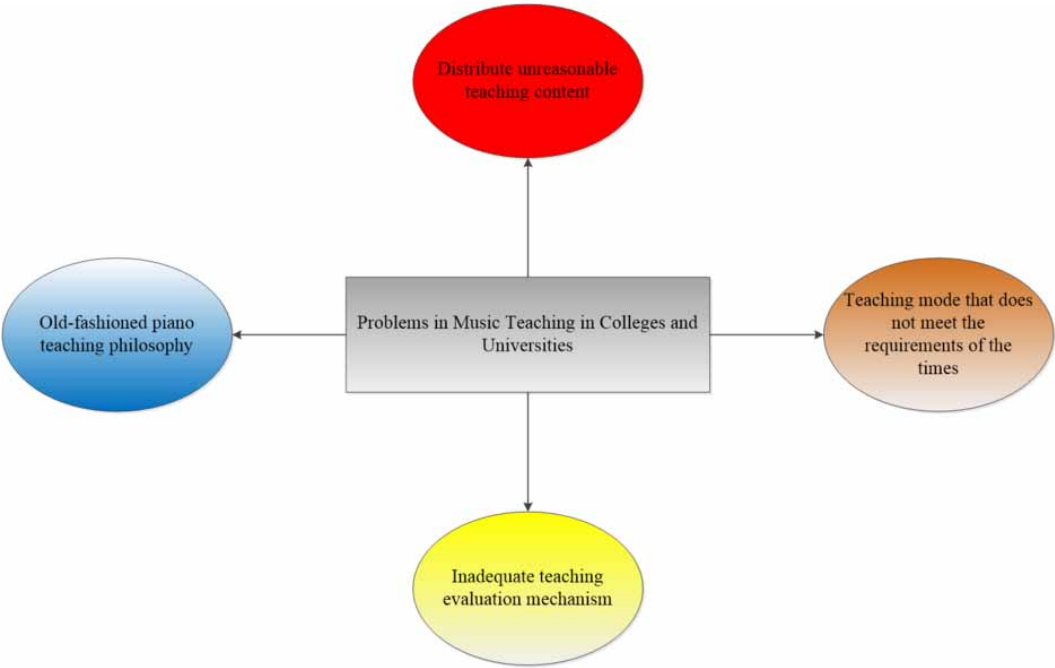
The innovation in piano teaching at universities begins with a shift from original traditional teaching ideas (Comeau et al., 2019). The traditional teaching mode is teacher-centric, resulting passive learning for students who lack effective interaction or communication opportunities with teachers. At the same time, teachers cannot identify aspects for each student, leading to low efficiency music classroom teaching and incomplete piano knowledge. Exposure to this type of environment may cause students to lose enthusiasm for piano learning if they cannot understand the teaching.

To avoid such phenomena, universities must carry out innovative reforms in both teaching modes and content to address the fundamental problem of students' subpar learning status. Piano lessons in universities should focus on the cultivation of students' abilities (Zunkel et al., 2004). The goal of innovation and reform is to enhance students' learning abilities and comprehensively cultivate their musical literacy. In addition, it can also effectively promote students' overall development.

As shown in Figure 1, these problems and contradictions encompass outdated piano teaching concepts, an unreasonable distribution of teaching content, instructional modes that do not meet contemporary requirements, and an imperfect evaluation mechanism. To ensure teaching quality stability, it is imperative to establish an appropriate evaluation mechanism for the teaching content. However, at present, most universities employ a relatively simplistic evaluation approach that cannot fully reflect the teaching standard. Thus, the comprehensive improvement of quality of students' quality remains constrained.

This limitation is mainly due from the insufficient emphasis on establishing a scientific and rational evaluation mechanism for piano teaching in universities. The current mechanism lacks consistency and precision, resulting in a crude approach to assessing piano content. Instead of using students' performance and artistic literacy as primary evaluation criteria, it relies on written test

Figure 1. Problems encountered in music teaching in universities



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