ICFTE
2nd INTERNATIONAL CONFERENCE ON FUTURE OF TEACHING & EDUCATION
Munich,Germany
6 - 8 December,2019

Intelligent Tutoring Systems in Music Education

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Abstract

Rapid changes in science and technology affect education as well as in every field. While the educational needs of individuals continue to increase, on the other hand, a number of ways are being sought to find solutions to them. Unlike classical methods, today, technology-based education such as online, distance and computer-based, are commonly used in educational institutions in all fields and at all levels. As a result of the researches related to these methods; some deficiencies, especially in computer-aided education, were observed as the problem-solving skills of the students improved. This case revealed the need for developing software which has the features of human intelligence. With the development of artificial intelligence technology, training programs shaped according to the students' personal features, development process and their learning tendency, and today, computer programs used in almost every field of education were prepared under the name of "Intelligent Tutoring Systems" (ITS). In this paper, the structure of ITS were investigated in general terms and ITS applications used in music education were introduced. Accordingly, the aim of this research is to give information about intelligent tutoring systems using artificial intelligence and to reveal how these systems are used in the fields of music education. This research is a descriptive survey model and the related theses, books, articles, proceedings, and web sites were examined by using the literature review. In the findings of the study, it was determined that ITS applications were used in ear training, music history, musicology and instrument education. Furthermore, according to the results of the literature review, research and development studies related to these applications are still in progress.

Keywords: Music Education, Intelligent Tutoring Systems, Artificial Intelligence.