**INDRODUCTION**

Since the beginning of the twenty-first century, the video-games market has become an established and evergrowing global industry. The health of the video and computer games industry, together with the variety of genres and technologies available, mean that videogame concepts and programmes are being applied in numerous different disciplines. One of these is the field known as serious games. The term serious games was coined by North American researcher Clark Abt in his book “Serious Games” in the 70s. Although the spirit of this trend has been maintained over the last decades, the technologies, applications and scope have changed significantly. Serious games represent a genre designed to be more than “just” fun. Moreover, the educational value associated to serious games goes beyond academic purposes, locating their focus on skill practice and entertainment value during exposure. The main purpose of a serious game is both to be fun and entertaining, and educational. A serious game is thus designed both to be attractive and appealing to a broad target audience, and to meet specific educational goals. They are designed to foster knowledge, skills or routine habits in the player. Serious games span a broad range of fields and areas of expertise. In the literature, serious games were divided into several categories based on different classification schemes. These models can be divided into two main categories: market-based and purpose-based classifications. Several authors established different categories of market-based classification. This segmentation is based primarily on the different “markets” or fields the serious games are developed for. The different segments identified in the literature are: − Military games, government games, educational games, corporate games, health-care games, political, religious and art games. − Health, public policy, strategic communication, human performance engineering, training and simulation, education, game evaluation. − Educational, social change, military, occupation and marketing. − Defense, teaching and training, advertising, information and communications, health, culture and activism. − K-12 edutainment, higher education, health-care, corporate, military, non-government and other. Different authors also provide different categories for purpose-based classifications, or intention they were intended to satisfy. − Advergames, activism games, training and simulation games, edugames, newsgames and edumarket games. − Business games, health and medicine, news, activism, advergames and political games. Other classification approaches use alternatives to the market/purpose distinction, proposing labels or tags as means of classification. Meanwhile, the G/P/S classification model considers a gameplay, purpose and scope trio. Finally, classification can also be conducted according to learning principles, target age group or game platform. The main goal of this article is to collect all the relevant articles published during recent years and create a trend analysis about the use of certain artificial intelligence algorithms related to decision making and machine learning in the field of serious games. A categorization framework was designed and outlined to classify available articles in the literature. The authors made use of this categorization framework for performing an analysis of the actual use of intelligent serious games.