Sustainable Consumption Design in Serious Game Based on Sips Model

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ABSTRACT

Achieving sustainable development throughout the design of product-service systems is important in the digital economy and the social media era. However, existing studies address the aspects of sustainable development partially, but the process of how consumers use product-service systems has not been taken into consideration. Therefore, we propose a sustainable consumption design approach based on the SIPS (sympathize, identify, participate, share&spread) model that considers the consumer behavior path rather than focusing on the design of the physical product. Sustainable consumption design (SCD) approaches address the entire product life cycle in two phases: the former comprises product-service systems design, whereas the latter involves user behavior paths such as sympathize, identify, participate, share&spread. The two phases connect and interact logically to attain sustainable consumption. The proposed SCD approach was used to develop a sustainable product-service systems design that exhibited prominent environmental, social, and economic performances. In the context of social media, through the serious game of "Environmental Defender," learn the type of marine garbage and become an environmental guard to participate in the issue of sustainable social development. Establishing a serious game dissemination framework on the Douyin platform almost incurs no environmental issues. Additionally, promotion and marketing costs are minimal. As long as the design is based on consumer behavior, captivating, high-quality serious game content can lead to spontaneous dissemination by users. Thus, the application of the novel SCD approach is innovative and highly beneficial.

Keywords: Product-service systems, Sustainability consumption, SIPS model, Serious games.