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The Design and Development of Online Infertility Prevention Education in the Frame of Mayer's Multimedia Learning Theory

Authors : B. Baran, S. N. Kaptanoglu, M. Ocal, Y. Kagnici, E. Esen, E. Siyez, D. M. Siyez

Abstract : Infertility is the fact that couples cannot have children despite 1 year of unprotected sexual life. Infertility can be considered as an important problem affecting not only sexual life but also social and psychological conditions of couples. Learning about information about preventable factors related to infertility during university years plays an important role in preventing a possible infertility case in older ages. The possibility to facilitate access to information with the internet has provided the opportunity to reach a broad audience in the diverse learning environments and educational environment. Moreover, the internet has become a basic resource for the 21st-century learners. Providing information about infertility over the internet will enable more people to reach in a short time. When studies conducted abroad about infertility are examined, interactive websites and online education programs come to the fore. In Turkey, while there is no comprehensive online education program for university students, it seems that existing studies are aimed to make more advertisements for doctors or hospitals. In this study, it was aimed to design and develop online infertility prevention education for university students. Mayer's Multimedia Learning Theory made up the framework for the online learning environment in this study. The results of the needs analysis collected from the university students in Turkey who were selected with sampling to represent the audience for online learning contributed to the design phase. In this study, an infertility prevention online education environment designed as a 4-week education was developed by explaining the theoretical basis and needs analysis results. As a result; in the development of the online environment, different kind of visual aids that will increase teaching were used in the environment of online education according to Mayer's principles of extraneous processing (coherence, signaling, spatial contiguity, temporal contiguity, redundancy, expectation principles), essential processing (segmenting, pre-training, modality principles) and generative processing (multimedia, personalization, voice principles). For example, the important points in reproductive systems' expression were emphasized by visuals in order to draw learners' attention, and the presentation of the information was also supported by the human voice. In addition, because of the limited knowledge of university students in the subject, the issue of female reproductive and male reproductive systems was taught before preventable factors related to infertility. Furthermore, 3D video and augmented reality application were developed in order to embody female and male reproductive systems. In conclusion, this study aims to develop an interactive Online Infertility Prevention Education in which university students can easily access reliable information and evaluate their own level of knowledge about the subject. It is believed that the study will also guide the researchers who want to develop online education in this area as it contains design-stage decisions of interactive online infertility prevention education for university students.

Keywords : infertility, multimedia learning theory, online education, reproductive health
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