

Deploying Advanced Technology to Develop Innovative Products for Preschoolers

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Abstract:

Advanced technology has invaded our daily lives in a big way, and it has become difficult for a person to be able to dispense with it, because it makes a person daily work easier, so the designer must not ignore the role of advanced technology and the extent of its impact on product design, especially products for preschool children, as advanced technology has become widely available in the hands of young children, which prompted us to study the Deploying of advanced technology to develop innovative products for preschool children that suit the skills of each child individually. The research explained a brief summary of the concept of advanced technology, its types and applications in the field of children's products. Also explained cognitive thinking of pre-school children and their mental and physical abilities, discussed the research through surveys and interviews with specialists from teachers and professors of faculties of education, a group of products for children after adding advanced technology and studying the impact of this technology on children and finally trying to determine the expected advantages and risks It will occur in the future as a result of the intervention of evolution Technology for the children's world. **Research Problem:** The problem of the research lies in the lack of scientific research on the study of the deploying of advanced technology on children's products and the study of how to take advantages of this technology that has become easily circulated in their hands in developing personalized innovative products that contribute to the development of cognitive thinking for these special age group . **Research Objectives:** The research aims to study the employment of advanced technology on the products of preschool children and how to take advantage of the technology available in their hands easily in conjunction with the cognitive thinking of this age group and their cognitive abilities in developing personalized products that suit each child individually and contribute to the development of various cognitive skills. **Importance of Research:** The importance of the research lies in studying how to employ advanced technology to develop products for pre-school children, whose ages range from 3-5/6 years old, also studying how to take advantage of this technology in developing innovative products that suit their skills, inclinations, and individual differences between them, which helps in developing their cognitive skills. Providing them with a lot of information and experiences and qualifying them to the school stage, which is the next stage for them, while they are overburdened with the information they have acquired through advanced technology, and they exploit their energy and benefit from it. **Research Methodology:** The research follows (Inductive approach - Deductive approach) followed by a qualitative and a quantitative approach: **Results:** When designing the product for children, it must be considered that the design is admired by the guardian at the beginning, because he is considered the first financier and the decision-maker, and if he is not convinced of the value in the product, he will not buy it even if the child wants it. The product must be full of cheerful colors and graphics to catch the attention of the child and the guardian. The product is better and stronger when it contains one of the children's favorite characters or the product is part of the nostalgia, i.e., parents played with in their childhood and now they buy it for their children in a new way. The product must be well manufactured and finished and made of high-quality materials that do not affect the environment and are not toxic to children. The environment factor must be taken into consideration when designing toys, especially since children consume a lot of toys, so recyclable materials must be used and not be a burden on the environment when they are disposed of. It is very important to consider the ergonomic aspect of the product design, especially that the target group is children. The product must be easy to use, and the safety aspect should be considered, not having small pieces that can be swallowed or toxic materials that can harm the child if placed in his mouth.

Keywords:

Advanced technology, Personalized products, educational technology (Edu tech), Augmented Reality (AR)

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