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Smart Learning for Young Minds using Puppet-Based Learning & Emerging Technologies

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Abstract

- Digital technology can enhance children's creativity and innovation when used properly. Tools like AI, AR/VR, and simple digital apps should support not replace teachers and parents. A balanced approach helps children grow creatively in a healthy way.

Introduction

- Creativity and innovation play a key role in children's development. Digital tools such as AI, AR/VR, and creative play can enrich learning and help children explore their abilities when used wisely. It is important that technology complements guidance from adults and does not replace real human interaction.

Technology in Parenting: Creating Creative Home Environments

- Parents can use technology as a tool to encourage creativity rather than only entertainment. Simple AI, music, and art apps can help children explore their talents and think creatively. To be effective, technology should be balanced with physical play, social interaction, and shared use with parents for safe and meaningful learning.

Artificial Intelligence as a Creativity Facilitator

- AI can enhance children's creativity by personalizing learning, giving feedback, and supporting creative activities like storytelling, music, and art. It can also help identify talents early. However, AI must be used ethically to ensure children remain active and creative users, not passive ones.



Augmented Reality (AR) and Virtual Reality (VR)

- AR and VR make learning fun and interactive.
- AR adds digital elements to the real world.
- VR allows children to explore and create in virtual environments.
- These tools encourage creativity and imagination.
- These technologies increase engagement and allow children to experiment without fear of mistakes and also supporting problem-solving skills.



Puppet-based learning



- Puppet-based learning supports children's imagination, communication, and emotional development. By combining puppets with simple digital tools like animation and AR, storytelling becomes more engaging. This approach enhances creativity, teamwork, language skills, and problem-solving, especially for young children and those with communication challenges.



Integrating Arts, Music, and Technology to Discover Talent

- Combining arts, music, and technology helps identify and develop children's talents early. Through STEAM learning, digital tools like music and animation apps support creativity and reveal hidden abilities. Early exposure allows parents and teachers to recognize strengths and guide children's development.

Issues and Moral Concerns

- Too much screen time can affect children's health, sleep, focus, and social skills.
- Active and creative use of technology is better than passive use like watching videos.
- Digital inequality means not all children have equal access to devices, internet, or learning support.
- This inequality can increase educational gaps if not addressed.

Issues and Moral Concerns

- AI raises ethical issues such as children's privacy, data protection, and possible bias.
- Over-reliance on AI tools may reduce children's own creativity.
- Technology-based learning should respect cultural differences and local traditions.
- Human guidance, emotional support, and cultural values must guide technology use.

Prospects of Technology-Assisted Creativity

- Generative AI can support creativity by helping children create music, art, and stories.
- AI should be used as a creative partner, not as a replacement for children's ideas.
- AR and VR will become cheaper and easier to use in classrooms.
- These tools can help children learn by doing, such as creating virtual art shows or solving real-world problems.

Prospects of Technology-Assisted Creativity

- Maker technologies like robotics, coding, and digital design help develop innovation and problem-solving skills.
- Arts-based maker activities help children see technology as a tool for expression, not just technical work.
- Collaboration between teachers, artists, technologists, and communities is essential.
- Future education should focus on creativity, well-being, and ethical use of technology.

Recommendations

- Use technology in a purposeful and creative way, not for passive screen time.
- Focus on interactive tools such as AI creativity apps, music and art tools, AR storytelling, and digital puppets.
- Schools should integrate technology into arts and play-based learning.
- Teachers need proper training to use AI, AR/VR, and puppet-based learning effectively.

Recommendations

- Adopt STEAM approaches combining arts, music, and technology.
- Provide access to creative spaces and digital tools (AR/VR, coding, music labs).
- Ensure equal access to technology and reduce the digital divide.
- Use AI ethically to protect children's privacy and support creativity
- Encourage collaboration between parents, educators, and developers to design child-centered learning tools

Conclusion

- Creativity and innovation are essential skills for children today. When used carefully, technologies like AI, AR, and VR can support creative thinking and problem-solving, especially when combined with arts and play. With proper guidance from parents and teachers, technology can enhance learning without replacing human interaction, helping children grow confidently and creatively.

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