Digital Games at Different Levels

The digital games are classified as per the new pedagogical and curricular structure envisaged by the New National Education Policy (NEP)-2020 which includes, foundational (age 3-8 years), preparatory (age 8-11 years), middle (age 11-14 years) and secondary (age 14-18 years). There are other categories of games as well such as miscellaneous and 'Heritage games'. The games have been solely developed based on NCERT curriculum and help in fostering critical thinking and design thinking among learners.
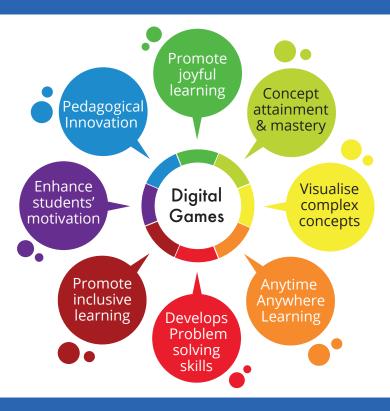
Interactive E-Books

Interactivity in textbooks has been incorporated by way of QR codes which are mapped to various interactive and gamified resources to enhance students' learning. In order to further enhance the interactivity of the textbooks, a project has been recently undertaken to develop interactive e-books by using certain interactive softwares such as PDF Professional software. One such interactive e-book titled as, "Itihas" has been currently developed and is presently showcased in the Toyfair. This interactive e-book has audios, videos and gamified eContent embedded with the e-book.

Accessible E-Comic Books

In order to make teaching learning accessible for all learners including Children with Special Needs (CWSN) and Persons with Disabilities (PwD) the learning environment needs to be improvised and enriched with learning resources. CIET, NCERT has been constantly developing eContent in the area of inclusive education by way of sign language videos, audio-video interactive eContent and accessible eContent which helps in making learning and teaching accessible and enjoyable. Accessible E-Comic books are developed based on the idea of 'inclusivity' and have embedded audio, visual and interactive eContent for making learning more accessible.
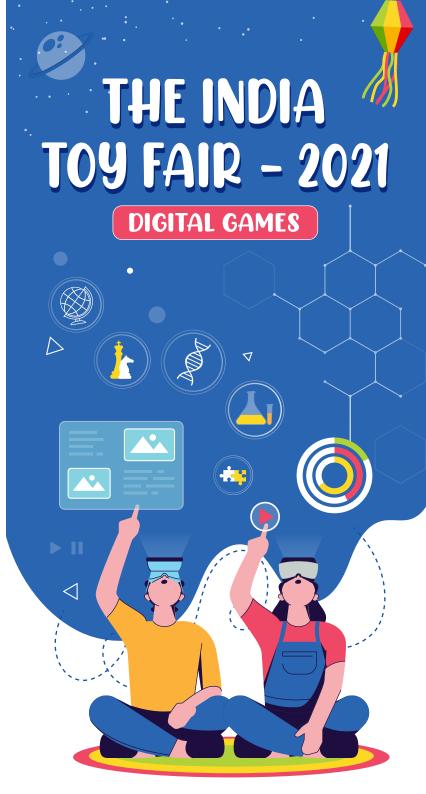
Heritage Games

Heritage is an important asset for any nation, not just for the preservation of its history but also provides a context for understanding the present culture and fabric of a nation. Therefore, it is important to learn about our rich heritage. Some digital games have been designed to showcase the cultural heritage of India, such as: Riwayat-e-dilli: An interactive board game that depicts the narratives, chronologies, monuments and symbolisms of Delhi in a playful manner. Buddhi yoga: This is an experiential and introspective digital board game encoded with the narratives of Advaita philosophy.

Let's explore the world of Gamified Learning

https://itfdigitalgames.ncert.org.in/

विद्यया ऽ मृतमश्नुते

एन सी ई आर टी
NCERT

Central Institute of Educational Technology
National Council of Educational Research and Training
Sri Aurobindo Marg, New Delhi - 110016
www.ciet.nic.in, www.ncert.nic.in

THE INDIA TOY FAIR – 2021

DIGITAL GAMES

Digital Games
- Promote joyful learning
- Concept attainment & mastery
- Visualise complex concepts
- Anytime Anywhere Learning
- Develops Problem solving skills
- Promote inclusive learning
- Enhance students' motivation
- Pedagogical Innovation

Central Institute of Educational Technology (CIET), a constituent unit of NCERT, came into existence in the year 1984 with the merger of Centre for Educational Technology and Department of Teaching Aids. CIET is a premiere national institute of educational technology. Its major aim is to promote utilization of educational technologies viz. radio, TV, films, satellite communications and cyber media either separately or in combinations. The institute undertakes activities to widen educational opportunities, promote equity and improve quality of educational processes at school level. The institute develops and maintains various online education platforms and repositories that house thousands of eContent based on the National Curriculum Framework and the textbooks of NCERT.

CIET is constantly working toward realizing the goals of the Digital India Campaign of the Govt. of India and the present National Policy of Education (NEP-2020) by emphasizing upon integration of ICT in content, pedagogy, assessment and continuous professional development of teachers. The recent epidemics and pandemics necessitate that alternative mode of quality education need to be leveraged and developed simultaneously so that learning is not affected. In this regard, the National Education Policy 2020 recognizes the importance of technology enabled, carefully designed and researched online/digital education. However, this must be done in a well-integrated and systematic way so that learning becomes more effective and enjoyable.

The Digital Games have been developed in CIET, NCERT keeping in mind the following objectives:

- Promote meaningful and joyful learning
- Acquisition of concepts related to various subjects in an engaging way
- Develop gamified assessment for achieving learning outcomes
- Promote acquisition of digital learning by integrating immersive learning experience

The integration of digital games in teaching learning will not just transform the way students learn in the classroom but will also enhance their learning outcomes. Digital Games is an active area for extensive research both on the technological as well as educational fronts and their potential need to be tapped for realising the learning goals of 21st Century.

Gamified Learning

Gamified learning is an educational approach which includes game elements in the learning environment. The major objective of gamified learning is to motivate students to learn more by enhancing their interest and making the process of learning more enjoyable. Games can be developed around various themes and help in the development of various skills of the learners such as motor, comprehension, application, analytical, critical thinking, problem solving and design thinking skills. Some games can also be played in groups so that they can help in enhancing the socio-emotional skills of the learners as well.

CIET, NCERT has developed a plethora of digital games in the form of interactive activities based on the NCERT curriculum of different subject areas. These games are interesting to play and develop an understanding of difficult concepts and terms among students. Digital Games developed by CIET constitute a wide range of games including audio-video games, visual interactives, interactive e-comic books and AR-VR (Augmented Reality-Virtual Reality) eContent and apps. These games can be played using any electronic device having internet such as computer, laptop, tablet or even mobile phones. These games are currently housed on the NROER (National Repository of Open Educational Resources) and DIKSHA (Digital Infrastructure for School Education) portals of NCERT. They can also be freely downloaded from the website and could be played at any time.

TAXONOMY OF DIGITAL GAMES

- Inclusion
  - Accessibility
  - Interactivity
  - Equity
- Social
  - Collaboration
  - Competition
  - Achievement
- Ecological
  - Sustainability
  - Conservation of Resources
  - Joyful Learning
- Emotional
  - Empathy
  - Sensitivity
  - Care
- Culture and Heritage
  - Trusteeship
  - Responsible Citizenship
  - Community Building
- Personal and Developmental
  - Attention Span
  - Constructivism
  - Engagement
  - Critical Thinking
  - Design Thinking