

E-CONTENT: AN OVERVIEW

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Abstract

The rise of online education has become increasingly significant in recent years, with online modes being a preferred method in the current educational landscape. The National Education Policy (NEP) 2020 also emphasizes online teaching and learning methods. Learners can now enroll in various online courses to enhance their knowledge and qualifications. This has created a need for content creators to develop high-quality e-content, ensuring that learners benefit from these educational resources. To achieve this, content designers must adhere to specific guidelines for e-content creation. Following these guidelines plays a crucial role in the creation of effective and engaging learning materials that meet the needs of learners. Institutions such as the UGC, NCERT, CIET, and SWAYAM have established frameworks for e-content development. This paper focuses on the process of developing e-content and provides guidance to content creators for producing high-quality educational materials.

Keywords: e-content, Quadrant of e-content, Phases of e-content, evaluation.

Aims and Objectives

Aim

The goal of this paper is to provide an in-depth understanding of the guidelines and processes for developing quality e-content, ensuring it enhances teaching and learning effectiveness.

Objectives

1. To standardize parameters for e-content creation.
2. To define clear objectives for e-content development.
3. To establish evaluation criteria for assessing e-content quality.

Methods

This paper uses a descriptive analysis research methodology to outline the stages, processes, and guidelines essential for e-content development.

Introduction

With e-learning, students can keep up with the ever changing landscape of education. All forms of material produced and disseminated by electronic media are referred to as e-content. Digitally formatted information or material is referred to as e-content. We have access through digital formats, computers, and the internet. E-content is becoming more and more significant for both official and informal education. The teaching and learning process is supported by e-content. These days, everyone can access online education through universities, institutes, and institutions. Anybody can begin their educational journey via any

portal or institution. Students have internet access to e-content and instructional resources at any time and from any location. Text, movies, presentations, animations, graphics, and other media were all included in the variety of e-content. Audiovisual and video content works best. The electronic content created by users

E-Content

Because it can be accessed at any time and from any location, e-content is becoming more and more popular. In the process of studying online, time is a crucial component. Any student can sign up for any course of their choosing, and they can always access course-related educational e-content. Students can read and watch the material repeatedly until they grasp it. Subject matter specialists ought to produce e-materials or movies to convey their knowledge. Simple language, clarity, and a clear voice are all necessary for content. E-materials must be current and devoid of copyright restrictions. Each of these factors affects students. Any type of material that is created and distributed using different electronic media that combines text, audio, animation, video, and other elements is referred to as e-content.

Types of E-Content

E-content refers to any content delivered digitally through electronic or computerized systems. The materials may include various formats such as text, audio, video, animations, and images, making it versatile and accessible on different devices. The following outlines the different types of e-content that are used in educational and informational contexts:

- **Text:** Written material conveying information, ideas, or narratives, such as articles, blogs, and eBooks. Text serves as the foundation for digital content, being utilized in nearly all forms of communication across platforms.
- **Videos:** Moving visuals paired with sound or narration that are highly effective for storytelling, tutorials, and demonstrations. These can be found on platforms like YouTube, TikTok, and educational sites such as SWAYAM.
- **Audios:** Sound-only recordings including podcasts, audiobooks, and voiceovers. This format is ideal for auditory learners and can be used for content like audio guides or spoken content in learning environments.
- **Presentations:** Structured content using slideshows or talks, commonly used in academic, business, and sales contexts. Presentations can be created using tools like PowerPoint and Prezi.
- **Animations:** Visual motion graphics, often in 2D or 3D formats, used to explain complex concepts or tell stories, making them ideal for educational videos and advertisements.
- **Graphics, Images, and Charts:** Visual elements such as diagrams, photos, infographics, and data visualizations that accompany or enhance textual information, breaking down data and providing clarity to complex topics.

Objectives of E-Content Development

The development of e-content serves various educational and communicative purposes. The key objectives include:

- Developing accessible e-content that requires minimal technical expertise from users.

- Creating engaging and effective content for various learning platforms.
- Supporting the teaching and learning process by integrating ICT tools.
- Ensuring inclusivity and catering to the needs of diverse learners.
- Designing interactive and appealing content.
- Aligning content with educational goals to maximize learner success.
- Offering training and resources for content creators to improve the quality and reach of their materials.

Phases of E-Content Development

The creation of high-quality e-content involves multiple stages, which allow for systematic planning, design, and evaluation. These stages are:

- **Analysis of E-Content:** In this crucial phase, content creators analyze the subject matter, the target audience, and the objectives to define the scope and structure of the e-content.
- **Design Phases:** Here, the content structure is planned. This includes deciding on the software, technical requirements, subject matter, and media components like text, images, and animations.
- **Development Phases:** This phase involves actual content creation, including the production of audio, video, animations, and other interactive elements.
- **Testing Phases:** The content is tested in the real-world educational context to identify errors like spelling mistakes, broken links, or content clarity issues.
- **Implementation Phases:** E-content is delivered to the target audience, and its functionality and quality are assessed in practice.
- **Evaluation Phases:** This stage involves collecting feedback from learners and instructors to evaluate the effectiveness and satisfaction of the e-content.

Quadrant Systems for Online Education

Institutions like SWAYAM and NPTEL use a quadrant system for delivering e-content. This model is divided into four main quadrants:

- **E-Text:** Written content such as PDFs, which provides a detailed explanation of the subject matter. E-text materials are created by subject experts and include multimedia elements such as images, charts, and audio.
- **Self-Learning (Audio/Video):** This quadrant involves videos and audio that explain the modules in an engaging manner. Content should adhere to UGC guidelines, with videos lasting 30 minutes and designed with high-quality visuals and sound.
- **Learn More/Web Resources:** Here, additional resources such as websites, blogs, and databases are provided to enhance learning. Learners are encouraged to explore further materials beyond the primary content.
- **Self-Assessment/Evaluation:** This quadrant allows learners to assess their understanding through quizzes, MCQs, and other evaluative tools. The goal is to test comprehension and ensure mastery of the content.

Guidelines for E-Content Development

The University Grants Commission (UGC) has outlined guidelines for developing high-quality e-content for educational purposes. Key aspects include:

- **Prerequisites and Roles:** Content writers must be subject experts, with clear roles defined for each stage of the development process, including content writing, editing, multimedia production, and quality assurance.
- **E-Content Modules:** Each e-content module should include a variety of media formats (text, video, audio, etc.), clear objectives, and measurable learning outcomes. Content should be free of plagiarism and formatted for easy access.
- **Development Process and Time Frame:** The development of e-content follows a structured process, from pre-production (conceptualizing and scripting) to post-production (editing and validating content). A defined timeline helps ensure timely delivery.
- **Quality Assurance and Standards:** All content should meet specific technical standards for video quality, audio clarity, and image resolution. Content creators must also adhere to curriculum and pedagogical standards to ensure the content is educational and effective.

Evaluation Criteria for E-Content

The UGC has established specific evaluation criteria for assessing the effectiveness of e-content. These criteria ensure that the content is accessible, learner-friendly, and pedagogically sound. Key criteria include:

- **Technical Friendly-** Any e-content should be access without any hindrance. Content should be downloaded and use an any types computer.
- **Learner Friendly-** E-content should be easily learnable, accessible at any time and location, and prepared in simple language, free from grammatical errors, ensuring no difficulties for learners in any module.
- **Learner Centric-** E-content is beneficial for all learners, utilizing text, graphics, animation, and simulation. Videos should be clear, 30 minutes long, and have good audio quality. Provide evaluation content for learners to complete self-evaluation.
- **Teacher Friendly-** Content writers should employ simple teaching methods to create e-content that caters to all learners, fostering a closer relationship between students and the teacher.
- **Learners Centric Pedagogy-** Content designers should focus on technical models, simple information communication, exploratory approaches, discovery approaches, and mastery learners, and incorporate interactive elements for effective and efficient learning.
- **Self-Evaluation** - Self-evaluation involves individuals or learners examining and assessing their professional work, incorporating both formative and summative evaluation methods.
- **Object Based Learning/Teaching-** The learner's approach to learning involves using art, artifacts, archival materials, and digital representations of unique objects to create a deeper learning experience.

- **Pedagogical Standards:** The content should align with the curriculum, support self-paced learning, and foster knowledge acquisition, problem-solving, and critical thinking.

Outcomes of E-Content Development and Evaluation

E-content development and evaluation are crucial steps in creating effective, engaging, and inclusive educational resources. By adhering to established guidelines, content creators, subject experts, and production teams can produce high-quality materials that meet educational goals. This results in improved learning experiences, as e-content is easily accessible, engaging, and adaptable. Quality control and evaluation ensure that content is continuously improved based on feedback from learners and instructors. E-content is also more accessible and inclusive, as it follows guidelines set by organizations like UGC, SWAYAM, and NCERT. It promotes active learning and self-paced study, allowing learners to access materials at their convenience. Interactive elements like quizzes, discussion forums, and self-assessments foster active engagement from both teachers and learners, facilitating a more personalized learning experience. E-content supports lifelong learning by providing learners with ongoing access to educational resources. This also reduces the need for physical textbooks and classroom-based learning, making it a cost-effective and time-efficient method of teaching and learning.

Content creators gain essential skills in multimedia production, instructional design, and ICT tools through the process of creating e-content. E-content development aligns with national educational policies, such as the National Education Policy (NEP) 2020, ensuring that it aligns with broader educational goals. By adhering to these guidelines, e-content development can lead to more effective, engaging, and inclusive learning materials.

Conclusion

Online education is increasingly becoming the preferred method of learning, with e-content playing a key role in enhancing the learning experience. It is essential for content creators to follow established guidelines to develop engaging, effective, and high-quality e-materials. By adhering to these guidelines, content creators can ensure that e-content meets the needs of all learners, thereby improving the overall teaching and learning experience. Quality e-content plays a crucial role in learner satisfaction and academic success, making it essential for content creators to prioritize high standards in the development process.

References

1. Laleh, Khojasteh and other, 2023, E-content development of English language courses during COVID-19: a comprehensive analysis of students' satisfaction, J. Comput. Educ. (2023) 10(1):107–133
2. Surjoday, Bhattacharya and other, 2023, Assessment of qualities of pandemic-driven econtent developed for higher education in India, Cogent Education, pg.-1-15
3. Dr. B. Prabakaran and Ar. Saravanakumar, 2022, Effectiveness of E-Content Development: An Analysis of Gender Difference, Neuroquantology | November 2022 | Volume 20 | Issue 17 | Page 1636-1644.
4. Reeja, Irall and Kiran, 2022, 'Development of E-content Module and Measuring Effectiveness in the Topic Understanding ICT and its Application at B.Ed Level.'

- International Journal of Early Childhood Special Education, 1 Vol 14, Issue 05, pg.-5443-5449.
5. Srutirupa, Panda, 2021, 'E -Content Development in Higher Education: An Essential Criteria for Post Pandemic Quality Education'. International Advanced Research Journal in Science, Engineering and Technology Vol. 8, Issue 9, pg.-254-258.
 6. Inderpreet, Kaur and other, 2020, 'Development of E-Content: "No longer a critical Step'. International Journal of Advanced Science and Technology, Vol. 29, No. 8s, (2020), pg. 981-990.
 7. B. Prabakaran, Challenges Of E-Content Development Module of Teaching and Learning, Sambodhi, Vol-43, No.-4, (R) October-December (2020).
 8. Namita,Khot, E- Content Development and Management: Initiatives of INFLIBNET, Journal of Advancements in Library Sciences, Volume 6, Issue 1,pg.284-289
 9. Rakshak, Jain,2020, Technological Approaches for E-Content Development and Deployment A Qualitative Analysis From Experts' Perspective, International Journal of Information and Communication Technology Education Volume 16 – 3,pg.-92-112
 10. Inderpreet, Kaur , Ms Jyoti ,Ms.Raskirat,2020, perspectives of e-content: a systematic review, International Journal of Advanced Science and Technology Vol. 29, No. 6s, (2020), pp. 2698 – 2715
 11. A. Arun, Dr. G. Singaravelu,2019, e-Content Development: future and provocation, JASC: Journal of Applied Science and Computations, Page No:2379- 2386
 12. Miss. Viyanna Cabral and other 2018, contextual e-content development for content enrichment in higher education, AMIERJ Volume–VII, Special Issue–XXIII, pg.-125-129.
 13. E-CONTENT DEVELOPMENT, Consortium for Educational Communication, An Inter University Centre of University Grants Commission,IUAC Campus, Aruna Asaf Ali Marg,New Delhi – 110067
 14. UGC Guideline for e-content development
 15. Guidelines For E-Content Development of Project, Submission for Assistance From Ugcunder Nme-Ict
 16. Guidelines for content writers under e-pg pathshala, ugc
 17. https://dsel.education.gov.in/sites/default/files/2021-06/CWSN_E-Content_guidelines.pdf
 18. <https://www.ugc.gov.in/oldpdf/xiplanpdf/econtentxiplan.pdf>
 19. <https://ncert.nic.in/pdf/GuidelinesforeContent3.pdf>
 20. <https://www.iehe.ac.in/PDF/FDP/E-ContentDevelopmentGuidelines.pdf>
 21. <https://www.ugc.gov.in/oldpdf/xplanpdf/econ.pdf>
 22. <https://www.ugc.gov.in/oldpdf/xiplanpdf/EContentxiplan.pdf>
 23. <https://swayam.gov.in/>
 24. https://dsel.education.gov.in/sites/default/files/2021-06/CWSN_E-Content_guidelines.pdf
 25. <https://ciet.nic.in/deir.php>
 26. https://tripurauniv.ac.in/Content/pdf/Pathshala/CW_Model_V2.pdf

27. https://www.education.gov.in/sites/upload_files/mhrd/files/CWSN_E-Content_guidelines.pdf
28. https://www.ugc.gov.in/pdfnews/2458012_e-content.pdf
29. https://ciet.nic.in/upload/Guidelines_eContent_v1.pdf
30. https://ncte.gov.in/Website/PDF/Accessibility_Guidelines_NCTE.pdf