The Indian Educational TV: Outreach, Perceptions and Preferences

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Abstract

This research paper is based on a dipstick survey aimed at understanding the role of educational television in improving access to educational opportunities for students living in remote areas in India. The study investigates the outreach of educational TV, with special focus on analysing the awareness of PM e Vidya DTH TV channels among students across geographical areas, gender and age groups. It further explores the role of educational TV during the COVID-19 pandemic and investigates perceptions towards educational TV, along with varying preferences for types of eContent among teachers, students and parents regarding its content. The data were collected from 13 states and two union territories, primarily involving responses from school-going children in rural and urban areas, as well as their teachers and parents. The study employed a descriptive survey research design and adopted a quantitative approach to analyse the data gathered through online survey questionnaires. It was found that educational TV programmes supported the educational needs of 89.7% students during COVID-19.Additionally, a significantly higher percentage of students (77.66%) compared to teachers (65.06%) agreed that eContent is beneficial for learning.

Keywords: *Educational television, outreach, awareness, perception, preferences, PM eVidya, COVID-19*

Introduction

With advancements in educational technology, disruptive technologies like augmented reality and virtual reality have redefined the teaching–learning landscape, creating dynamic and immersive educational experiences. Yet, amidthis wave of innovation, the familiar medium of educational television remains a steadfast and valuable tool. While relying on traditional technologies like television and radio in times of the Internet might seem like revisiting the 1950s–70s, considering the significant digital divide, television can emerge as an effective audio-video aid for school-going children.

According to MacGregor (2007), "Television is a powerful medium with key roles to play in education—in providing news and information, including about education issues, policies and developments; in the form of dramas, soap operas, and other programmes with educational messages; and in the delivery of educational support programmes to the public and to schools." A vital role of television is to assist children in learning moral values through the portrayal of characters in cartoon shows and TV series, which can have a long-term positive impact on their development (Joshi, et al., 2020).

The importance of television was further realised in developing countries like India, where the COVID-19 pandemic disrupted the mainstream education system without sufficient time to prepare adequately for remote learning. In response, educational institutions worldwide adopted hybrid teaching and learning methods, incorporating

television as a means to reach students and and ensure continued access to high-quality instruction (Morgan, 2020). Bell, et al. (2020) assert that television and radio broadcasts have significant potential to reach a vast number of learners, particularly those who are most vulnerable. During the COVID-19 pandemic, Mexico's Aprendeen Casa (Learning at Home) programme ensured educational continuity for 25 million students by utilizing educational TV broadcasts and online platforms, supplemented by printed materials for areas with limited Internet access (Ripani and Zucchetti, 2020).

In India, a set of 34 SWAYAM Prabha DTH TV channels played a crucial role in sustaining education during the pandemic, highlightingthe potential of television as an effective educational tool. The success of SWAYAM Prabha DTH TV channels during this period catalysed a significant shift in India's educational landscape, reinforcing the importance of television in reaching students with limited digital access. Leveraging Direct-to-Home (DTH) channels to disseminate educational content, in particular, has the potential to bridge gaps in accessing quality education, reduce the digital divide and address challenges related to scale, diversity and equity.The National Education Policy2020 (NEP 2020) advocates the extensive use of technology in online and digital education to promote equity(Para 24.2).

- Extensive use of existing mass media, such as television, radio and community radio for telecasts and broadcasts, to address the digital divide and reach a substantial section of population whose digital access is highly limited (Para 24.4).
- Leveraging technology to strengthen adult education through satellite-based TV channels (Para 21.10)
- Telecasting programs for Anganwadi workers/teachers through digital/ distance mode using DTH channels (Para 1.7).

Indian Educational TV: Major Initiatives

Since the inception of television network in independent India, several important projects have been launched, such as the Secondary School Television Project (1961), Delhi Agriculture Television (DATV) Project (Krishi Darshan, 1966), Satellite Instructional Television Experiment (SITE) (1975), Post-SITE Project (1977), Indian National Satellite (INSAT) Project (1982), UGC's Higher Education Television Project (HETV) (1984), IGNOU's Doordarshan Telecast (1991) and Gyan Darshan educational channel (2000) (Vyas, Sharma & Kumar, 2002). The extensive use of DTH TV channels for educational purposes, utilizing GSAT satellite technology, began in 2017 under the Department of Higher Education, Ministry of Education (formerly, the Ministry of Human Resource Development), through the SWAYAM Prabha initiative, a group of 34 DTH channels (now, 40) dedicated to broadcasting high-quality educational programmes via the GSAT-15 satellite, ensuring 24×7 access to quality education. The educational content broadcast is largely aligned with standard curricula and sourced from renowned educational institutions and organisations of India, such as the National Programme on Technology Enhanced Learning (NPTEL), Indian Institutes of Technology (IITs), University Grants Commission (UGC), Indira Gandhi National Open University (IGNOU), Consortium for Educational Communication (CEC), National Institute of Open Schooling (NIOS) and the National Council of Educational Research and Training (NCERT). As a part of this initiative, a channel named Kishore Manch, run by NCERT, is exclusively dedicated to the telecast of e-content related to school education.

Many educational initiatives, including SWAYAM Prabha, DIKSHA and NISHTHA have been leveraged in India throughout pre- and

post-COVID periods. The Government of India (GOI) recognised the potential of educational television as a means to engage school-going children during the pandemic, which caused significant disruptions to students' education. To address this, both national and state governments implemented educational television as a key initiative to support students' education during the crisis (Jena, 2020). Consequently, a comprehensive initiative called PM eVidya was launched on 17 May 2020, as part of the AtmaNirbhar Bharat Abhiyan, unifying all efforts related to digital, online and on-air education to enable multi-mode access to learning.

The initiative was introduced under the Department of School Education and Literacy (DoSE&L), Ministry of Education, GoI, with the objective of ensuring the continuity of children's education during the COVID-19 pandemic and providing multimodal access to quality e-Content at their doorsteps,both during and after the crisis. Among the various integrated components, the PM eVidya initiative included 12 DTH TV channels under the One Class-One Channelproject for Classes 1 to 12, which was an unprecedented step.

Building on the success of these 12 DTH TV channels, the government announced a major expansion of the programme during the Union Budget 2022–23 presented on 1 February 2022. This expansion aimed to increase the One Class-One TV Channel initiative from 12 to 200 TV channels to impart supplementary teaching, build a resilient mechanism for education delivery amid the pandemic, enable all states to provide supplementary education in various Indian languages and bridge the digital divide across India. On 9 March 2024, the Ministry of Education, GoI, launched 200 PM eVidya DTH TV channels, marking a significant milestone in expanding educational broadcasting resources and enhancing digital learning accessibility across the country.

PM eVidya DTH TV Channels: Pedagogical Perspective and Scope

The development of e-Content and its integration into teaching and learning depend on the nature of the content and the target learners. The systematic development of quality e-Content, particularly for PM eVidyaDTH TV channels, follows established instructional design frameworks, with the ADDIE (Analysis, Design, Development, Implementation, Evaluation) model serving as a foundational approach to ensure alignment with learning objectives and audience needs. When integrating e-content into teaching and learning practices, the TPACK (Technological Pedagogical Content Knowledge) framework provides educators with a structured approach to effectively blend content knowledge, pedagogical strategies and technological tools (Source:https://ciet.ncert.gov.in/dth).

These channels telecast engaging and high-quality e-Content contributed by States and Union Territories, autonomous bodies, including NCERT, the Central Board of Secondary Education (CBSE), Navodaya Vidyalaya Samiti (NVS), Kendriya Vidyalaya Sangathan (KVS), National Institute of Open Schooling (NIOS), Ministry of Skill Development and Entrepreneurship (MSDE), Central Institute of Classical Tamil (CICT). These organisations develop and provide video content tailored to their target learners.

The e-Content cover a wide spectrum, including school education (for all stages, i.e., 5+3+3+4), teacher education, vocational education,adult education andlanguage learning. It is made available in 29 Indian languages, including Indian Sign Language (ISL), enabling learners from diverse linguistic backgrounds to access quality educational content. It aligns with NEP 2020 and its emphasis on multilingualism and mother tongue-based instruction.

The curricular video content is also available on DIKSHA portal and app as part of the resilient, coherent and multi-modal strategy recommended by NEP 2020. Additionally, the 200 PM eVidya DTH TV channels are being made available as simulcasts on YouTube. These channels also telecast live programmes and interactive sessions based on textbooks for Classes 1 to 12, as well as content on yoga, Manodarpan, Sahyog, online training on ICT and teaching–learning interventions for inclusive classrooms.

Review of Related Literature

Educational television has long been a thoroughly researched topic, with its cognitive, moral, affective and behavioral impacts widely acknowledged. Satyanarayana and Sesharatnam (2000) documented the UK Open University's adoption of television as an instructional tool, primarily in experimental settings to demonstrate tool usage and record important events.

Wartella, et al., (2015) conducted a study in the USA examining how parents of children below eight years of age engage with various forms of media. The findings indicated that parents were more likely to use traditional media, like television and books, while children were more inclined to use video games and smartphones.

In India, access to digital devices remains uneven. Only 4.4% rural households had access to computers, compared to 14.4% in urban areas. Similar findings have been observed in Internet access, with only 14.9% rural homes having access compared to 42% urban homes. Further, the survey indicated a poor level of digital literacy, with only 13% people above five years of age in rural habitations being able to use the Internet, compared to 37% in urban habitations (NSSO, 2017–18, GoI, 2020).

Aulia and Batubara (2021), in their study, reported that teachers found educational TV channels to be an effective medium for engaging students in online English learning through educational TV in rural schools of Thailand during the COVID-19 pandemic. Similarly, Nwokedi, et al., (2022) examined the effectiveness of Interactive Radio (IR) and Interactive Television (ITV) programmes in enhancing life skills among out-of-school nomadic children in Nigeria. Using a quasi-experimental design with 470 participants, the findings of the study showed significant improvements in life skills for both IR and ITV groups, with ITV participants showing greater enhancement. The study recommended utilising both IR and ITV for educating out-of-school nomadic children, with a preference for ITV.

Research studies consistently demonstrate that television has proven to be a powerful educational tool, bridging learning gaps and transcending geographical barriers. Its significance is particularly evident in regions with limited digital infrastructure, where traditional technologies continue to play a crucial role in educational delivery.The persistent digital divide, coupled with television's demonstrated educational efficacy, underscores the need for investigating the reach, impact and potential of educational TV programmes in addressing educational disparities and enhancing learning outcomes across diverse socioeconomic contexts.

Significance of the Study

Assessing the efficacy of TV-based education holds substantial implications for educational policy, practice and research. Understanding the reach, awareness and impact of educational television programmes is crucial for making informed decisions regarding processes like resource allocation, programme design and pedagogical strategies. Moreover, in the context of digital transformation of education, assessing TV-based education provides insights into how technology can be can be strategically used to address educational disparities and improve learning outcomes. By examining the outreach, perceptions and preferences regarding educational television programmes,

this study aims to contribute to the ongoing discourse on innovative approaches to education, the equitable provision of learning opportunities for all students and bridging the digital divide.

Objectives

The objectives of the research study are as follows.

1. To study the outreach of educational TV in India across geographical areas, gender and age groups
2. To understand and assess the role that educational TV channels played in supporting students during the COVID-19 pandemic
3. To analyse the perceptions of teachers, students and parents regarding the quality and effectiveness of on-air educational TV programmes
4. To identify the preferred choices of teachers, parents and students regarding e-Content for educational TV programmes

Methodology

This study follows a descriptive survey research design based on a digital survey to assess the reach of DTH educational channels among students and to understand how various stakeholders, i.e., teachers, students and parents, perceive on-air educational TV programmes as a facilitator for learning and their preferred choices regarding such programmes. The data were collected using self-administered online survey questionnaires (separately designed for students, parents and teachers) through Google Forms. The survey included students (n = 681) from Classes 1–12 studying in Kendriya Vidyalayas, Jawahar Navodaya Vidyalayas, ICSE schools, State board schools, as well as their parents (n = 513) and teachers (n = 728) from rural and urban areas of 13 states—Assam, Bihar, Haryana, Himachal Pradesh, Karnataka, Madhya Pradesh, Manipur, Meghalaya, Odisha, Punjab, Rajasthan, Uttarakhand, Uttar Pradesh and two Union Territories—Jammu & Kashmir and Delhi. A non-probability convenience sampling technique was used for data collection, and a quantitative approach was employed to analyse the data.

Results and Discussion

Outreach of Educational TV

Table 1(a) provides significant insights into TV viewership patterns across rural and urban areas of India, with a focus on educational TV. The data reveal that rural areas exhibit significantly higher engagement with educational TV (55.42%) compared to urban areas (36.89%). This highlights a notable disparity between rural and urban areas in terms of educational TV viewership, indicating the presence of a digital divide. Overall, the findings underscore the need for targeted strategies to enhance viewers' engagement with educational TV channels in both rural and urban areas.

Table 1(a): Area-wise outreach of educational TV

Geographical Area	Watch TV		Don't watch TV
	Watch Educational TV	Don't Watch Educational TV	
Rural	55.42%	33.73%	10.84%
Urban	36.89%	55.34%	7.77%
Total	41.41%	50.07%	8.52%
Total	91.48%	8.52%	

Table 1(b) reveals minimal disparities in educational TV viewership patterns on the basis of gender. The data show that viewership rate among males (42.03%) is slightly higher than females (40.77%). However, it is important to note that nearly 50% of both males (49.86%) and females(50.30%) do not watch educational TV channels.

Table 1(b): Gender-wise outreach of educational TV

Gender	Watch TV		Don't watch TV
	Watch Educational TV	Don't Watch Educational TV	
Male	42.03%	49.86%	8.12%
Female	40.77%	50.30%	8.93%
Total	41.41%	50.07%	8.52%
Total	91.48%		8.52%

Table 1(c) highlights age-specific patterns in educational TV viewership. Among the three age groups, children aged 5–10 years show the highest viewership at 42.38%, closely followed by those aged 10–15 years at 41.89%. However, viewership among those aged 15–20 years is slightly lower at 38.64%. The data suggest the need to tailor educational content to specific age groups, with a particular focuson addressing the interests and needs of all age groups.

Table 1(c): Age-wise outreach of educational TV

Age-Group (in years)	Watch TV		Don't watch TV
	Watch Educational TV	Don't Watch Educational TV	
5–10	42.38%	51.43%	6.19%
10–15	41.89%	51.62%	6.49%
15–20	38.64%	43.94%	17.42%
Total	41.41%	50.07%	8.52%
Grand Total	91.48%		8.52%

Further, it was found that among educational TV viewers, awareness of PM eVidya DTH TV channels varies significantly across geographical areas, gender and age groups. The area-wise analysis reveals a substantial awarenessgap of 23.35% between rural and urban areas, withthe rural population demonstrating notably higher awareness (54.35%) than the urban population (30%).

Gender-wise analysis indicates that females exhibit marginally higher awareness of PM eVidya DTH TV channels at 39.42% compared to males at 36.55%. Age-wise analysis among students demonstrates a clear trend of increasing awareness with age, with 22.47% for children aged 5–10 years, 41.55% for those aged 10–15 years, and 54.90% for the 15–20 years age group, indicating that awareness of PM eVidya DTH TV channels is most prevalent among teenagers and young adults.

The data reveal diverse sources of awareness for PM eVidya DTH TV channels among students, parents and teachers. Among the various sources, newspaper advertisements and articles account for 13.02%, social media platforms for 32.70%, personal networks (teachers, parents, guardians and friends) for 38.41% and random TV channel discovery accounts for 15.87%, highlighting the crucial role of interpersonal communication and social media in disseminating information about educational initiatives.

Role of Educational TV Channels during COVID-19 Pandemic for Students

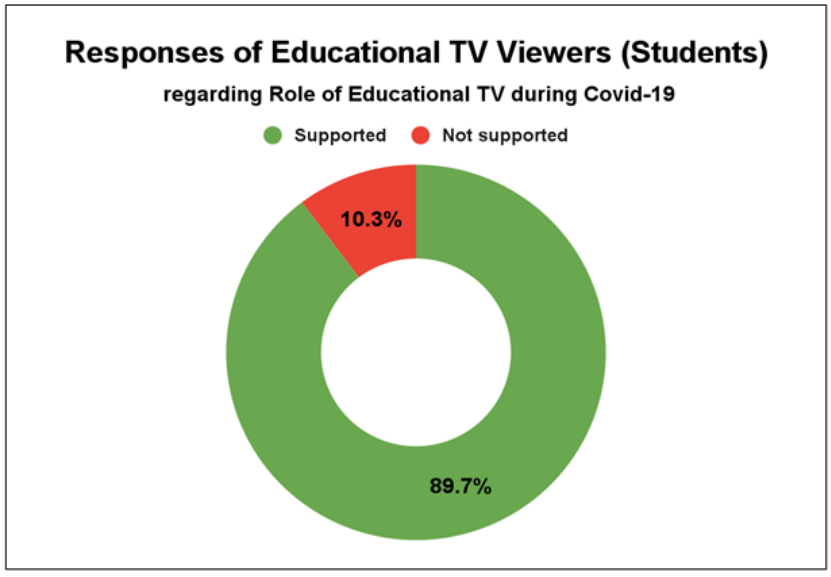

Figure 1(a): Responses of educational TV viewers (students) regarding the role of educational TV during the COVID-19 pandemic

The data reveal that among educational TV viewers, an overwhelming majority of students (89.7%) reported that programmes telecast on educational TV supported their educational needs during COVID-19. In contrast, only 10.3% felt that educational TV did not meet their needs during that period.

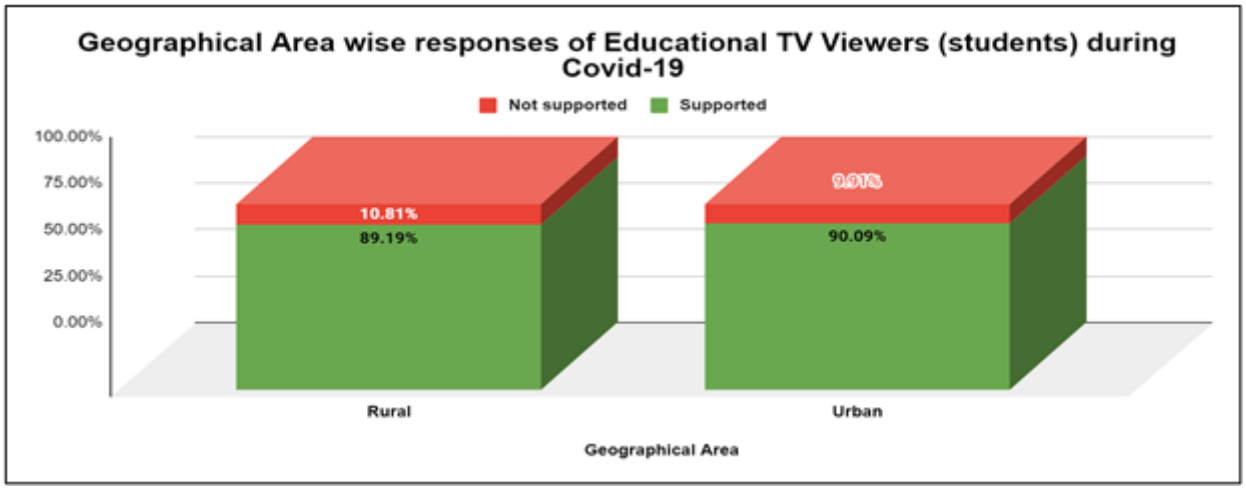

Figure 1(b): Area-wise responses of educational TV viewers (students) regarding the role of educational TV during the COVID-19 pandemic

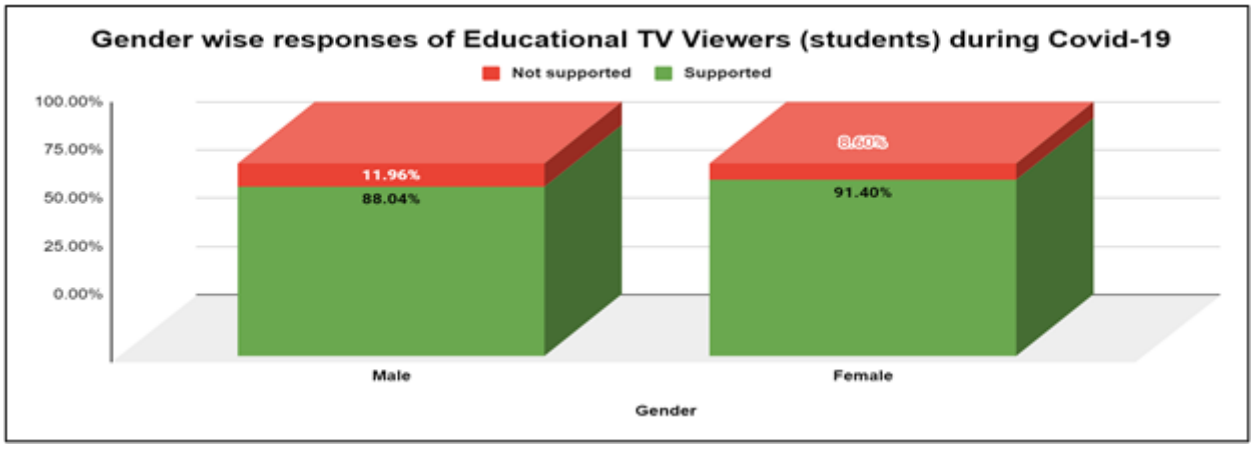

Figure 1(c): Gender-wise responses of educational TV viewers (students) regarding the role of educational TV during the COVID-19 pandemic

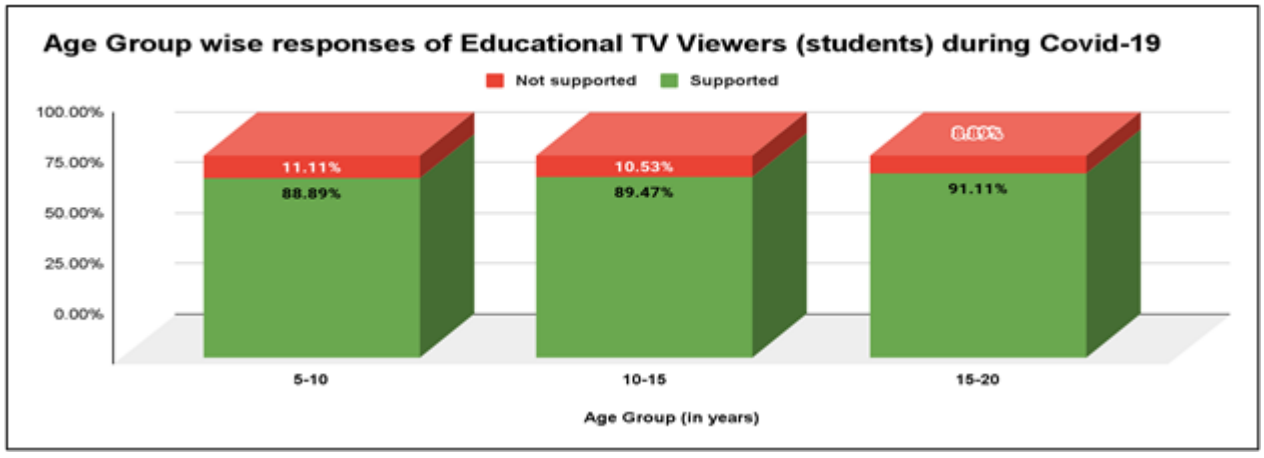

Figure 1(d): Age-wise responses of educational TV viewers (students) regarding the role of educational TV during the COVID-19 pandemic

Further, the data reveal that the during COVID-19 pandemic, a consistently high level of support for educational TV was observed among students across rural (89.19%) and urban (90.09%) areas. However, a small percentage of students in rural (10.81%) and urban (9.91%) areasindicated that their learning needs were not met by educational TV.

Similarly, a high level of support for educational TV was noted among male (88.04%) and female (91.4%) students, with a slight gender variation (3.36%). A consistently high level of support was also observed among all age groups, with the highest level of support found among students aged 15–20 years (91.11%). Students aged 5–10 years (88.89%) and 10–15 years (89.47%)also reported that educational TV supported their learning needs, while nearly 10% students in each age group felt their learning needs were not met, highlighting areas for potential improvement to enhance its effectiveness across the entire age spectrum of students.

Overall, educational TV proved to be a valuable and effective resource for students' learning needs across diverse geographical areas, genders and age groups, especially during unprecedented circumstances like COVID-19.

Stakeholders' Perceptions towards the Quality and Effectiveness of Educational TV Programs

Teachers' Perceptions

The data reveal that among teachers using educational TV programmes, a significant majority (69.55%) believed that the e-Content shown was interesting. Additionally, 67.9% teachers agreed that the e-Content telecast on educational TV provided comprehensive knowledge. Most of the teachers (65.02%) found the e-Content beneficial for the teaching–learning process. A total of 61.73% teachers agreed that e-Content reduced the need for tuition, while 25.10% disagreed. Regarding the pedagogical alignment of e-Content with classroom needs, 36.63% teachers agreed that it was well-aligned, 43.62% remained neutral and 19.75% disagreed. Varied responses were received regarding the achievement of learning outcomes. A total of 69.55%teachers agreed that e-Content supported their professional development. However, the relatively high percentage of neutral responses regarding pedagogical alignment and support for learning outcomes indicate a need for potential improvements in designing e-Content.

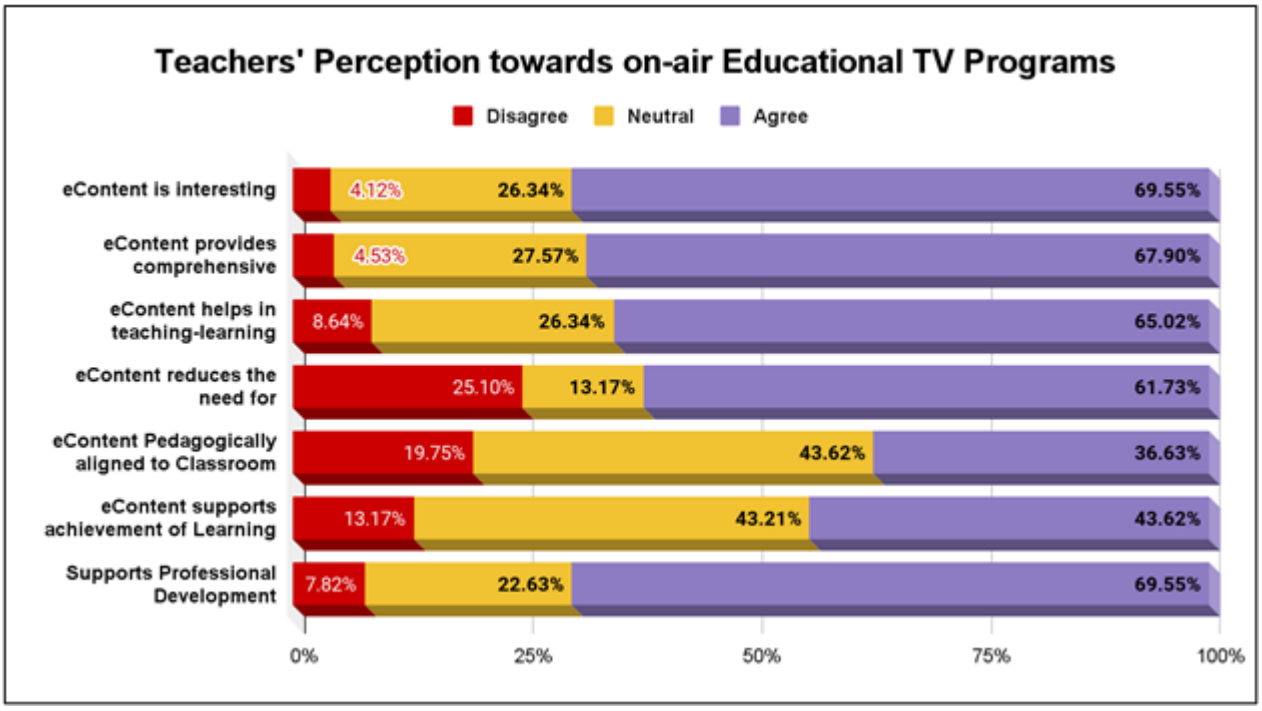

Figure 2(a): Teachers' perceptions towards the quality and effectiveness of on-air educational TV programmes

Students' Perceptions

The data reveal that among students who watched educational TV, a significant majority (67.73%) found the e-Content interesting, reflecting a high level of agreement with teachers' responses. Additionally, 68.44% students perceived that e-Content provided comprehensive knowledge, which closely aligns with the teachers' views. A notably high percentage of students (77.66%) compared to teachers (65.06%) agreed that e-Content was beneficial for their learning. However, a significant divergence was observed regarding the reduction of tuition or coaching. While 61.73% teachers agreed that e-Content reduced the need for tuition or coaching, only 37.94% students shared this view. Notably, 36.17% students maintained a neutral stance on this issue.

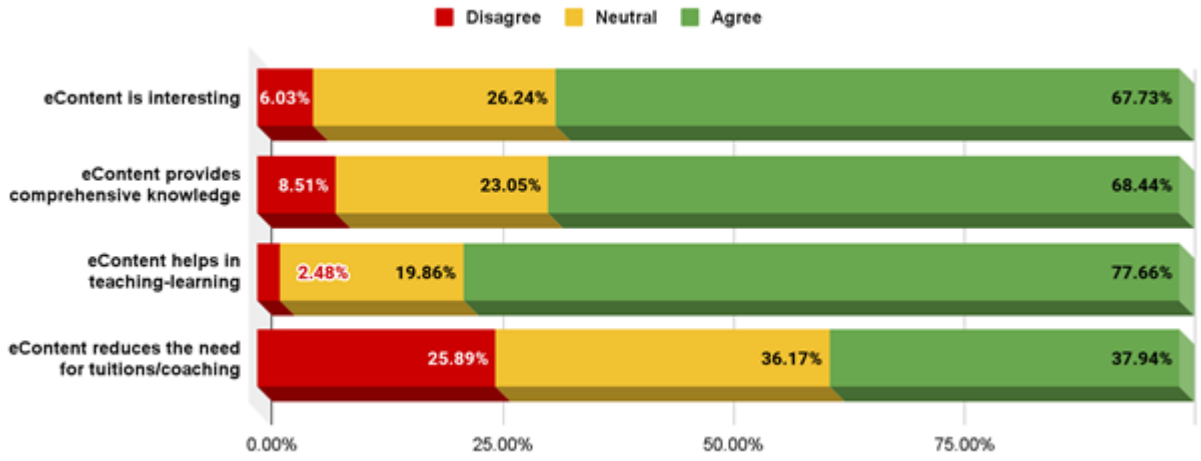

Figure 2(b): Students' perceptions towards the quality and effectiveness of on-air educational TV programmes

Parents' Perceptions

The data reveal that among parents whose children watched educational TV, a majority (75%) agreed that e-Content shown on educational TV programmes was interesting. Additionally, about 70% parents believed that it provided comprehensive knowledge. A high percentage of parents (73.34%) also agreed that e-Content also helped in the teaching–learning process. These findings align with the perceptions of teachers and students regarding interest, comprehensiveness, and support for teaching and learning. Diverse opinions were reported regarding the reduction in the need for tuition or coaching, with 45.31% parents agreeing that e-Content reduced the need for additional tuition or coaching, 26.56% remaining neutral, and 28.13% disagreeing, reflecting the perceptions among students and teachers. The notably high neutral response from parents (44.53%) regarding the age-appropriateness of e-Content and its support for academic achievement suggests uncertainty in assessing how well these programmes align with their children's academic needs and age levels.

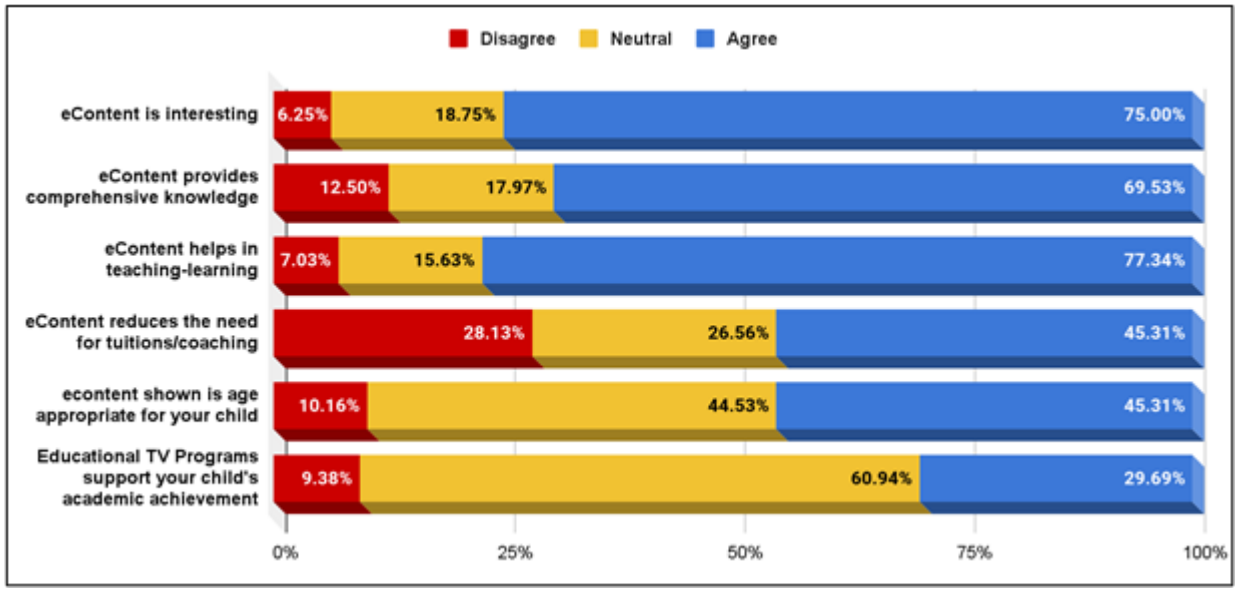

Figure 2(c): Parents' perceptions towards the quality and effectiveness of on-air educational TV programmes

eContent preferences of stakeholders

Data on preferred types of e-Content among students, parents and teachers reveal insightful patterns in their choices of educational content. General awareness content emerges as the most popular option across all three groups, reflecting a strong inclination to acquire knowledge beyond the curriculum. This is followed by concept-based content and textbook chapter-based content, indicating a preference for core concepts, alongside textbook material. Notably, exemplar questions maintain consistent interest across all groups. Interestingly, while sports and games-related content generates significant interest, especially among students, it is comparatively less preferred by teachers and parents. Lectures, however, are the least preferred, particularly among teachers, possibly indicating a paradigm shift in teaching and learning approaches. Overall, this diverse range of preferences highlights the need for more interactive and engaging e-Content presented in various formats.

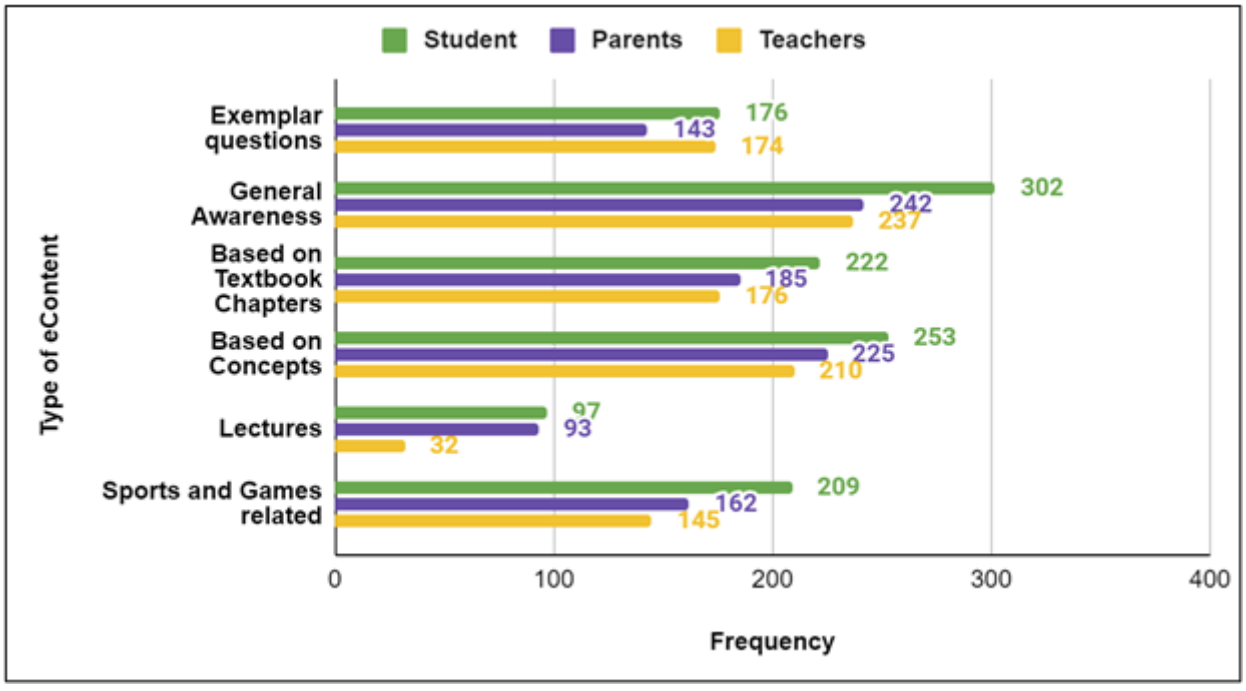

Figure 3: Preferred choices for content for educational TV programmes

Suggestions

Based on comprehensive data and analysis from previous discussions, it is recommended to implement targeted advocacy campaigns for educational TV to reach a wider population in both rural and urban areas, and enhance awareness among learners of all age groups. Providing multimodal access will further help bridge the digital divide and extend educational reach to even the remotest parts of the country. The content for educational TV programmes should be age-specific and pedagogically aligned, tailored for diverse audiences with varying needs and preferences. Developing more engaging and interactive content will ensure a higherlevel of learnerengagement and effectiveness.

Conclusion

This research underscores the significant potential of educational TV as a valuable tool in the Indian education system, especially during the unprecedented circumstances of the COVID-19 pandemic. The study confirms that educational TV plays a crucial role in bridging the digital divide and

bringing learning directly to the learners' doorsteps. It also identifies potential areas for improvement, particularly in raising awareness levels, ensuring pedagogical alignment of content and enhancing the perceived effectiveness of e-Content in reducing the need for additional tutoring.

The varying preferences for e-Content emphasizes the need for a diverse and tailored approach to content development and delivery. This study provides a foundation for informed decision-making and strategic planning by policymakers, educators and content developers in the evolving landscape of educational TV to enhance the effectiveness and reach of educational TV initiatives in India.

In this context, the PM eVidya initiative, with its 200 DTH TV channels, launched by DoSE&L, Ministry of Education, GoI, marks a significant step towards achieving the objectives outlined in NEP 2020. It ensures equitable access to quality education nationwide, transcending geographical barriers and promoting inclusivity—a core principle of NEP 2020.

The e-Content broadcast on these channels is meticulously curated to align with curriculum standards, thereby improving educational quality and supporting NEP 2020's mandate for enhanced learning outcomes.Its primary objectives include providing high-quality and engaging video content to learners in their mother tongues across multiple platforms and enabling them to overcome digital barriers. By embracing the principles of accessibility, quality and inclusion, initiatives like PM eVidya 200 DTH TV channels play a vital role in realising the vision of NEP 2020.

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Web Links

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