

EduEnable: Addressing Multiple Needs with Customizable Solutions for Special Needs Student

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Abstract -Our project address the challenge of connecting special needs children and their families with appropriate educational and support resources. Our web-based platform empowers parents and special needs children by offering a user-friendly form system through which they can request specific events, ranging from educational workshops to entertainment activities. Unlike other platforms with pre-defined events, EduEnable caters to individual requirements and features a dedicated page for upcoming virtual/actual events requested by users. This interactive platform provides a gateway for special educators as well, where they can get themselves enrolled as a part-time tutor, bloggers and they can conduct the workshops according to there expertise

Our aim is to build a comprehensive database of educators, trainers, caretakers, and organizations with job openings for the special needs community. Through streamlined forms, these professionals can submit their details and areas of expertise, making them readily discoverable by parents and students seeking support on our website. We also house a categorized library of therapy videos accessible to parents, providing valuable guidance and support for helping their children at home .For users with reading difficulties, a text-to-speech feature ensures everyone can access the wealth of information available on EduEnable. EduEnable is a “many problems, one solution” website which caters to the need of specially abled children as well as young adults.

INTRODUCTION

This paper presents a systematic and comprehensive framework about the educational website named as “EduEnable” for children with special needs and children with disabilities. Published research, papers, studies, doctoral dissertations and institutional research related to education for children with special needs and children with disabilities (CWSN/CWD) were considered for devising the current report.

Special or inclusive Education is a novel approach towards educating the children with disability and learning difficulties with that of normal ones within the same roof. About Eighty percent of Indian population lives in rural areas without provision for special schools. It means, there are an estimated 8 million children out of school in India (MHRD 2009 statistics), many of whom are marginalized by dimensions such as poverty, gender, disability, and caste .Fostering learning through various strategies, understanding the relationship of psychosocial factors in development and learning, academic performance, impact of significant people in development, and supporting learning through material development emerged as prominent choice of researchers. However, the analysis also shows that the research still seems to be considering disability as a deficit, and the need for shifting the focus to capacity approach by magnifying personal capabilities and dignity of CWD is strongly felt. Worldwide technology has played an important role in improving and expanding the education around the normal students as well as special students. Websites are a part of expanding technology through which institutions and different companies can easily share and advertise their things with others. This paper talks about how educational websites could benefit special children from various areas. Effective design of education websites is important as web users are typically fastidious and want information fast - this serves as the background of this study.

EduEnable is a transformative online platform committed to revolutionizing the educational landscape for specially abled children. Our mission is to create a virtual learning environment where every child, regardless of their unique challenges, can access quality education, build confidence, and unleash their full potential. Our platform is also designed to simplify

and enhance the process of organizing events that cater to the unique needs and abilities of these children, ensuring that every moment is filled with joy, learning, and positive engagement. At EduEnable we strive to create a world where every specially abled child has the opportunity to participate fully in the joy of events. It is a supportive online platform dedicated to connecting and empowering parents of specially abled children. Our mission is to create a nurturing community where parents can share experiences, exchange knowledge, and find valuable resources to navigate the unique challenges and joys of raising children. It also provides online therapy videos like occupational therapy, speech therapy, behavioral therapy which helps the children more and as well as parents. It also has a separate section with attached toys and items related to the children and the things which help them which the user can buy directly through the link.

This website not only focuses on the children, but they also give a platform to their parents to connect with other similar parents and can give or take suggestions from others. This paper discusses the impact and importance of a website or an e-platform in providing better opportunities for children with special needs (CWSN).

These days EdTech platforms are becoming increasingly popular among children. These platforms which equipped with rich content and interesting visual interfaces and support students after school, while they are doing homework and in free time activities.

Introducing eduenable to the World

This will provide more opportunities to the special children or person with disabilities who faced difficulties while searching for the right teachers or do not have suitable institutes or schools near to them.

It will attract more students towards the education which will lead to a good, educated society in the future and it also makes these students stable and independent in the future. Website will provide better learning resources to students.

Objectives of the website

- To provide the user friendly and efficient platform to special children and their parents.
- It helps the student to find special teachers around their areas and teachers can also register to the

website which helps them to connect with the children easily.

- To understand the various aspects of education in the field of disability (challenges, facilities, need).

Key Features of website

Family Involvement: Encourage family involvement in the therapeutic process to create a holistic support system for the child. Provide resources and guidance for parents to reinforce therapeutic activities between sessions.

Community Hub: Join a welcoming community of parents who understand the journey of raising specially abled children. • Engage in conversations, share insights, and provide mutual support.

Event Listings: Discover and share events specifically designed for parents of specially abled children. Attending virtual or local events to connect with other parents face-to-face.

Adaptive Learning Our platform offers adaptive learning technologies that cater to the individual learning needs of each specially-abled child. Through personalized learning paths and tailored content, we ensure that education is accessible and meaningful.

Direct Connection Between Parents, Students, Educators, Trainers, and Caretakers:

We facilitate direct communication between specially-abled students and dedicated educators, trainers, and caretakers, fostering a supportive and interactive learning environment. We also facilitate easy searching of nearby teachers, trainers, and caretakers so that parents can easily connect with them. Real-time feedback and personalized guidance contribute to the academic and personal growth of each child.

User-Friendly Interface: Our interface features an intuitive design for easy navigation, making it accessible to users with varying levels of digital literacy. Additionally, we provide a text-to-speech facility for those who have issues reading the website's content.

Literature Review

The literature review for this research is framed within the overarching concepts of special education, teacher and child interaction communication, and technology adoption in the context of India. It scrutinizes existing studies and frameworks related to the field of special

education design and evaluation and involvement of similar digital platforms for the peoples in developing countries. The development of educational applications for specially abled children has garnered substantial attention from researchers and developers aiming to enhance time management and productivity. In this literature survey, we explore existing works, methodologies, and insights from various authors and developers, shedding light on the evolution of similar applications and the technological landscape.

In India not enough work is done on this field technically but there are some reports published related to this. Similar to Western countries, the early origins of special education in India started with Christian missionaries and nongovernmental agencies which stressed a charity model of serving populations such as the visually, hearing, and cognitively impaired. However, after its independence from Great Britain in 1947, the Indian government became more involved in providing educational, rehabilitation, and social services. Thus, over the past four decades, India has moved gradually toward an inclusive education model.

Literature Survey on similar educational platforms

❖ Complex UI/UX design

Most of these types of platforms have complex user interface and design and children find it difficult to operate or use the platform and lost interest in the model.

❖ Focuses on online model

Involvement of children virtually seems to be low and they seem to be least interested and in these types of cases every child requires a special attention virtually which is not possible and if possible, a very short span of time is given to the child.

Parents find it difficult to look for a nearby teacher, either they are too costly or not fulfilling the child's requirement. The need for the personal tutor or teacher arises as in they the special education schools every child requires a special attention and time but there are lots of similar students and every child could not be able to get the long span of attention according to his needs.

Since children with disabilities form a considerable number of out-of-school children, it becomes vital that their needs are addressed by the schools and appropriate authorities. Considering this, the New Education Draft Policy 2016 will ensure that students

with varying levels of disability that includes visual, locomotor, speech and hearing, and neurodevelopment disorders are given the opportunity to be a part of the general education process. This policy refers to the Children with Special Needs (CWSN) and states that where the level of difficulty is great, provisions for special schools will be made. Additionally, it will also put down a special emphasis on the training and recruiting of teachers who will be able to teach in an inclusive classroom It also recommends to setting up of boards which will oversee as well as guide the schools in addressing the needs of those children with a learning disability.

Methodology

- Project Initiation: Defining Project Scope and Objectives. Clearly outline the goals, features, and functionalities of the application to align with user needs and expectations.
- Requirement Gathering and Analysis: Develop detailed user stories and use cases to capture functional and non-functional requirements. Conduct feedback sessions with potential users to gather insights and preferences.
- Design Phase: Develop a comprehensive information architecture to define the structure and flow of the application. Creating a wireframes and prototypes for user interface visualization and feedback. Finalize the technology stack considering scalability, performance, and user experience.
- Development phase: Implement the frontend and backend ensuring a responsive and intuitive user interface including data management and user authentication.
- Frontend Development:
 - Implement user registration and login.
 - Design dashboards for organization responses .
 - Implement search and filtering functionality.
 - Design different features and set up pages.
 - Using technology like HTML, CSS, JavaScript for layout.
- Backend Development:
 - Implement logic for posting and viewing reviews and problems.
 - Synthesis API for speech conversion.

- JavaScript in maintaining the pages.
- Database Design:
 - Define relationships between entities for efficient storage.
 - Asp.net for database connection.
- Integration Testing: Ensure seamless integration between the front-end and backend components. Conduct rigorous unit testing to validate the functionality of individual components.
- Ongoing Updates and Enhancements:
 - Get input from users to make iterative improvements.
 - Stay updated with the latest technologies and security practices.
 - Add new features.

Discussion

The literature suggests that a good educational website should be developed attractive, user friendly clever, compelling, and include outstanding contents to attract more visitors to visit it. Moreover, the website should keep out needless design, large and spanning graphics, videos, animations, because they make the website heavy and cannot be easily loaded. Furthermore, the graphics and color used in good websites should be attractive and meaningful which will attract more children and draw their attention towards education. In addition, good websites need to have fast loading pages, low scrolling, consistent layout, and be accessible on most browsers. We tried to include most of these important characteristics in Eduenable website.

Future Plans

Websites are always in the mode of change and need to be constantly updated. We will make the efforts to keep the eduenable website updated. The current version of the website is not the complete version of a website data of some pages (event tracker, some of the things) are partially missing, and we will also be working on enhancing the authenticity, security, and privacy of user data. So, our next step is to address all missing components of the website and make it more user-friendly and safer.

Conclusion

In conclusion, the development of this one-stop website catering to the diverse needs of specially abled students marks a significant stride towards inclusivity and empowerment. By providing a platform for hosting virtual events across various categories, from education to arts and entertainment, we aim to bridge the gap between specially abled individuals and the opportunities available to them.

Through this initiative, parents and specially abled students can access a plethora of knowledge and engage in activities that foster personal growth and integration into society. By democratizing the process of event organization, we ensure that every individual's interests and needs are acknowledged and catered to.

Furthermore, the incorporation of features such as finding nearby special teachers and job opportunities, as well as therapeutic videos, amplifies the support system for specially abled individuals beyond event participation.

Looking ahead, the potential for offline event expansion underscores our commitment to enhancing accessibility and inclusivity in the long term. As we continue to evolve and adapt to the changing landscape, our vision remains steadfast: to empower specially abled individuals, facilitate their holistic development, and foster a more inclusive society for all.

Certainly. In addition, it's important to highlight that parents and specially abled students have the agency to shape their experience on the platform by requesting specific types of events. This personalized approach ensures that the platform remains responsive to the unique needs and preferences of its users, further strengthening its value as a comprehensive solution for the specially abled community. By empowering individuals to actively participate in the event selection process, we foster a sense of ownership and inclusivity, reinforcing the platform's commitment to serving as a true reflection of the community it serves.

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