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A SWOT Analysis of E-Learning for Digital Education

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Abstract: ***The 21st century has become synonymous with E-learning as technological advancements continue to upgrade our daily lives, providing a crucial role in skill improvement within school education. Recently, E-learning has transformed and enhanced skill development in various areas, prompting the government of India to launch the Digital India flagship program with a vision to empower India into a digitally enabled society and knowledge economy. Furthermore, the Ministry of Human Resource Development's National Digital Library of India project provides education through information and communication, aimed at improving the Indian school education system. Therefore, this paper presents a SWOT analysis of E-learning in digital education for schools.***

Keywords: Digital Education, E-Learning, Skill Improvement, SWOT Analysis, Technological Advancement.

1. INTRODUCTION

Digital learning has revolutionized the Indian education system in many schools and educational institutes by utilizing technology-based practices to strengthen students' learning experience. There have been various changes in the Public Distribution System (PDS), user credentials, and email gateways. In 2004, there were only two significant programmes: Educational Technology (ET) and Computer Literacy and Studies in Schools (CLASS). These two programmes were eventually combined to form ICT at Schools, a more comprehensive government funded programme. The Rashtriya Madhyamik Shiksha Abhiyan has merged with the ICT at School Program (RMSA). Samagra Shiksha, a recently introduced integrated programme for pre-nursery through Class 12, is a centrally supported programme that incorporates midday meals in schools as part of the Union Budget for 2020–21. It is important to remember that the Samagra Shiksha programme combines the Teacher Education programme with the Sarva Shiksha Abhiyan (SSA), RMSA, and Teacher Education (TE), which aims to improve school effectiveness in terms of equal opportunities for schooling and equitable learning outcomes. India is currently one of the top countries in the world for technical advancement in schools, universities, and colleges, and is renowned for its quality and high standards, all thanks to the way that

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rapidly advancing technology is changing higher education in India. These days, even young children watch their favourite cartoons and learn rhymes in pictures while receiving their education through adaptable and unobtrusive arrangements. Students of all ages are learning the delights of studying and having fun while doing it as a result. There has also been a discernible change in how parents and educators view digital learning. Institutions are working hard these days to put the emphasis back on students so that they can reinvent learning throughout their entire lives.

SWOT Analysis

SWOT analysis[1] is an abbreviation for strengths, weaknesses, opportunities, and threats. This analysis considers the four elements' Strengths, Weaknesses, Opportunities, and Threats in order to gain insight into a certain situation. Strengths stand in for positivity or advantages, whilst weaknesses stand for negativity or drawbacks. Opportunities are a symbol of positivity or favourable conditions, whilst threats are a symbol of unfavourable ones.

In this study, we conduct a SWOT analysis of e-learning for digital education. With the help of this research, we provide tactical suggestions and implementations to improve digital education.

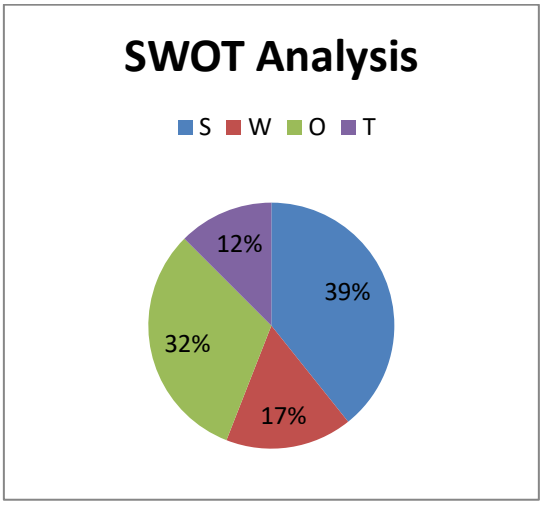

Fig.1. SWOT analysis

A. Research Question

RQ1. Digital Education perform due to the emphasis of ?
RQ2. Classrooms with digital learning tools cause due to?
RQ3. Digital Learning process relevant to?
RQ4. Digital Distance Learning (Online Learning) Education relevant to?
RQ5. Digital education (Online Learning) causes due to?
RQ6. Investment for digital learning tools by?
RQ7. Professional profile of student by E-Learning cause due to?
RQ8. Overall E-learning for Digital Education cause due to?

2. RESEARCH METHODOLOGY

For this study, a mixed research method incorporating both quantitative and qualitative data is considered to be the most appropriate approach. This methodology allows for a comprehensive understanding of the issues at hand by utilizing both types of data in a complementary manner.

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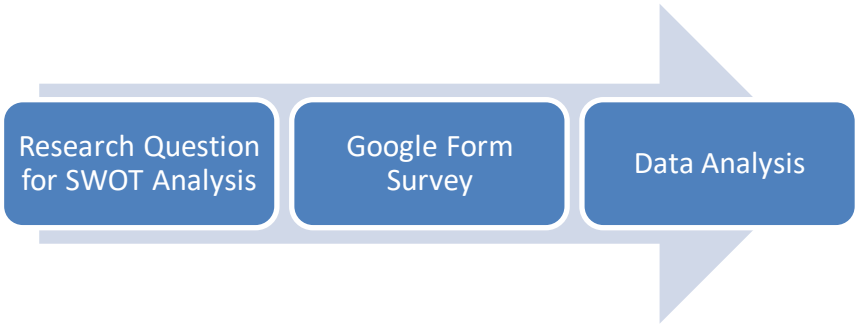

Fig.2. Research Method for SWOT analysis

The primary objective of this study is to examine the state of digital education [6], specifically with the help of e-learning tools.[2] A survey employing questionnaires was conducted to gather data on students' perspectives and experiences with online learning in order to achieve this. Participants were asked to answer questions regarding the current state of e-learning, their level of preparedness, and their personal knowledge and experience with e-learning. In a Google form, the participants were also asked to share their thoughts on the SWOT analysis of e-learning[3].
Based on the distinct replies received via the survey and Google form, we categorised the e-learning-related strengths, shortcomings, opportunities, and hazards and conducted an analysis of the data.

Data Analysis

The data gathered from the short survey were analyzed using Microsoft Excel. Initially, the data were subjected to descriptive analysis. The analysis was conducted based on individual responses to each question in the survey. All four response options were categorized as either strengths, weaknesses, opportunities, or threats (SWOT)[4], and the qualitative data were then analyzed[5] using Excel.

3. RESULT

The results pertaining to RQ1, RQ2, RQ3, RQ4, RQ5, RQ6, RQ7, and RQ8 were analyzed, and a graph was plotted based on individual responses. The majority of individuals chose the option for strengths, indicating that there is no immediate need for further improvement. However, in some cases, individuals responded with weaknesses, indicating that there are areas that need improvement. Based on their responses, we also evaluated the impact of these weaknesses.

Table.1. SWOT analysis of Individual responses

Question	S	W	O	T
RQ1	61.9	9.5	23.8	4.8
RQ2	57.1	4.8	23.8	14.3
RQ3	38.1	23.8	28.6	9.5
RQ4	14.3	4.8	61.9	19
RQ5	19	28.6	42.9	9.5
RQ6	47.6	28.6	23.8	0
RQ7	57.1	23.8	14.3	4.8
RQ8	19	9.5	33.3	38.1

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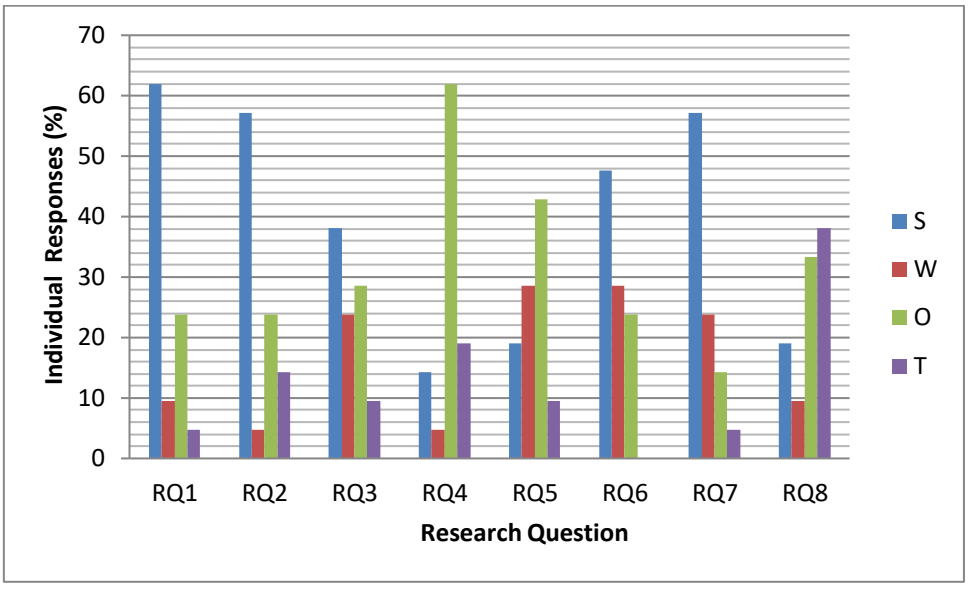
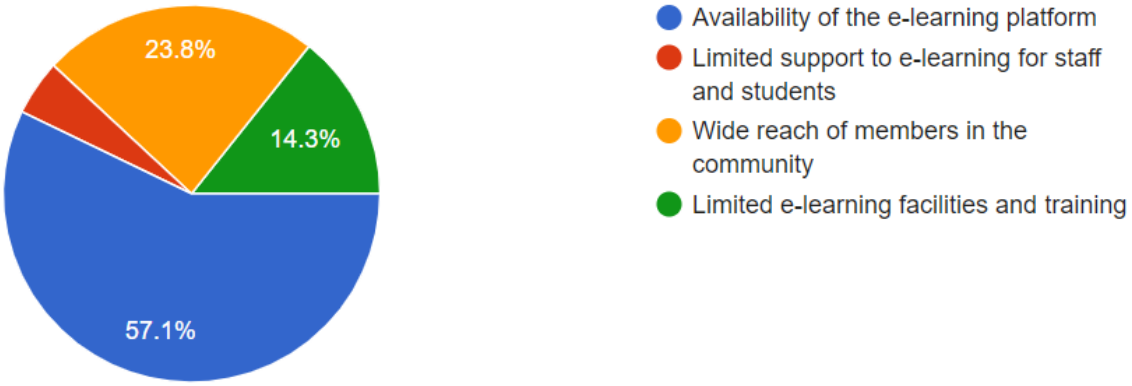


Fig.3. Research Question VS Individual Responses graph



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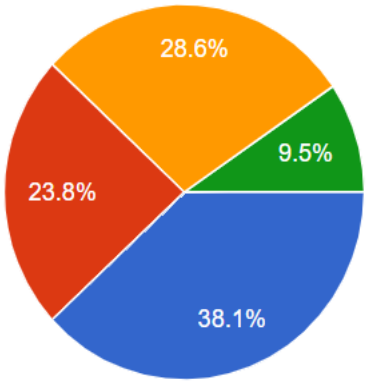
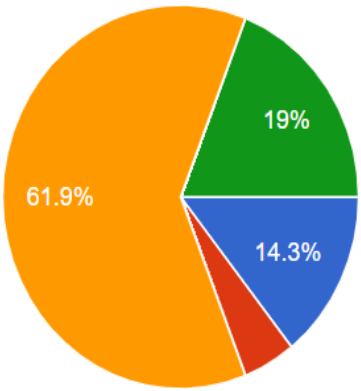
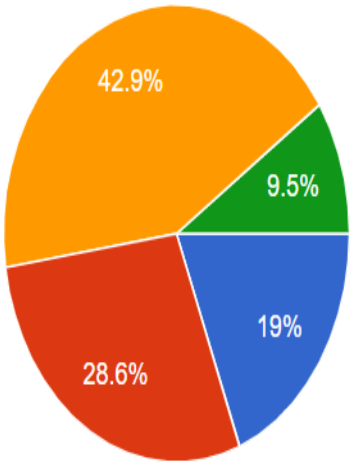


- Basic IT skills of most of staff and students
- Lack of commitment among staff and students to use e-learning in the teaching and learning processes
- Enhance teaching and learning interaction (among teachers and students)
- Resistance to change of some staff



- Willingness and commitment from a large group of staff
- Resistance of some staff to adopt change and new technology
- Participation of student from a distance; accessible way of learning regardless of location
- Risk of reduced face-to-face social interactions



- Competence of faculty staff
- Limited competences (knowledge, skill) of student and lack of training for staff for e-learning, e.g. limited capacity of staff to develop e-learning material or design
- Willingness to learn of staff and students
- Cultural issues and habits, e.g. favoring face-to-face communication pattern and lecture style of teaching

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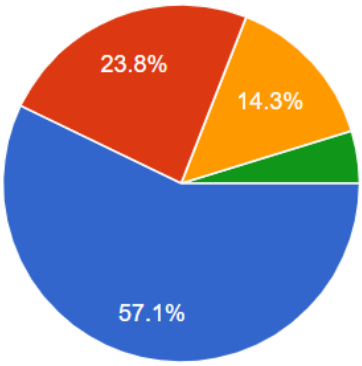
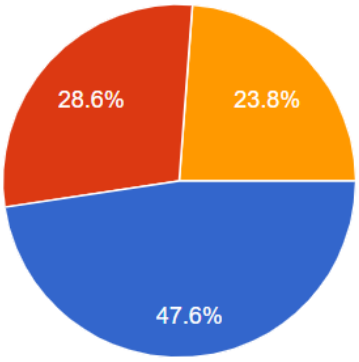
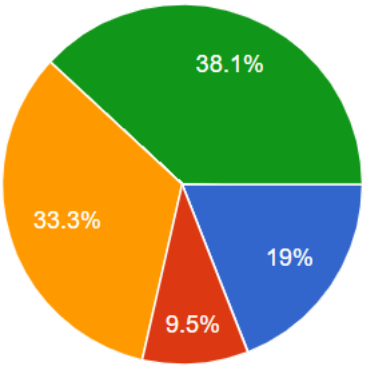


- University readiness to invest in e-learning and support of project funding
- Constraints in resource
- Available funding resources from external agencies
- Financial constraints



- Available computers, Internet and increased wireless access points
- Inadequacy of computers, PCs and Internet access for students and limited facilities per staff; unstable Internet connectivity and insufficient bandwidth
- Serving many students in a short time
- Fluctuation of Internet connectivity



- Top management commitment
- Absence of university policy on e-learning
- Management support
- Lack of institutional support; current policy or regulation may be in conflict of e-learning; e.g. classroom attendance

4. DISCUSSION

Digital education in schools can greatly benefit from e-learning for professional development. Technological upgrades provide numerous opportunities for teachers[7] to enhance their skills and knowledge. E-learning also offers the benefit of accessibility, flexibility and short-term online courses for professional development. In addition, digital education can promote international collaboration and networking in education and professional development[8]. There are various tools available in digital education, ranging from video conferencing to multimedia delivery and websites.

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