E-NEWSPAPER EDITION

Mayuri R. Ghagare

PG Student

Department of Computer Science

G.H. Raisoni University, Amravati ,India.

Abstract *:* This paper adds to the overall understanding of new media adoption in general and the promotion of the e-newspaper in particular by empirically studying the preferences and demands of the potential users. The e-newspaper is a newspaper published on e-paper technology. The findings in this paper is based on the results from two studies, i.e. an online questionnaire with 3626 respondents and an evaluation in real life settings with 10 families over a two week period. Our initial hypothesis was that: users confronted with a vision of new technology and services are more positive to adopt than users with actual use experience of technology and services in an early stage of development with inherent technology problems.

E-Paper is invented by Nick Sheridan in 1970. E-Paper are just like traditional paper. E-Paper are E papers of the future are just around the corner, promising to hold libraries on a chip and replace most printed newspapers by the end of the decade. They are made of flexible material, require ultra-low power consumption, are cheap to manufacture, and most importantly, are easy and convenient to read. E paper is a portable form of electronic paper. Reusable storage and display media that resembles paper but that can be written on (refreshed) thousands or millions of times via electrical means. E-paper will be utilized for e-books, electronic newspapers, portable signs, and fold able, roll able screens, among other applications.

keywords : Electronic paper, E Ink, Invention, Printing, Innovation, Print Media,adoption, use experience, e-newspaper.

I. INTRODUCTION

Electronic paper, often known as e-paper or electronic ink display, is a type of display that imitates the appearance of regular ink on paper. Electronic paper, unlike a traditional flat panel display, which requires a backlight to illuminate its pixels, reflects light like regular paper. It can store text and images endlessly without consuming electricity, and the image can be updated at any time. Several various technologies exist to create e-paper, some of which use a flexible display and a plastic substrate.

Reading on e-paper could be more comfortable than on a traditional display. This is owing to the steady image that does not require regular refreshment, the broader viewing angle, and the fact that it reflects rather than emits ambient light.

New mobile devices are constantly being introduced to the market offering new opportunities for publishing mobile mediacontent and services. It is very difficult however, for content providers to predict m-commerce markets due to the uncertainties related to adoption of new mobile technology and services [1].

Moreover, this situation is new not only to content providers, it is also new to the audience. The rapid introduction of mobile technology and new services has led to a situation where users are constantly trying out new appliances and new services. This turn changes use patterns as well as creates new preferences and demands, which leads to uncertainty about what people want [1].

Mobile service adoption has been studied by many scholars, e.g. drivers for adoption and intentions to adopt mobile services [2], factors influencing adoption [3;4], adoption patterns [5;6;7], and attitudes towards using mobile services [8]. Much of this research has been focused on the adoption of mobile devices as such, as

Gurukul International Multidisciplinary Research Journal (GIMRJ)_with_
International Impact Factor 8.249
Peer Reviewed Journal
https://doi.org/10.69758/GIMRJ2406I8V12P107

e-ISSN No. 2394-8426

Special Issue On
Advancements and Innovations in Computer Application: Pioneering Research for the Future
Issue–I(VIII), Volume–XII

without adoption of devices there is not any prospectfor successful m-commerce [9].

In the DigiNews and UbiMedia projects we have studied the potential of a new innovation for the media sector, i.e. the e- newspaper published on e-paper technology. As the e-newspaper introduction concerns both a new device as well as new content, it makes it an interesting case to study from an adoption point of view.

II. RELATED WORK

1. **User Interface and Experience (UI/UX) Design**: Research and analysis of existing e-newspapers can provide insights into effective design elements for a user-friendly interface. This includes layout, navigation, readability, and accessibility.

2. **Content Management Systems (CMS)**: Investigate different CMS platforms used for e-newspapers to understand their features, functionalities, and suitability for managing digital content efficiently.

3. **Digital Publishing Technologies**: Explore technologies and tools utilized in digital publishing, such as HTML5, CSS, JavaScript, and responsive design frameworks. Also, investigate techniques for optimizing content for various devices and screen sizes.

4. **Social Media Integration**: Investigate how e-newspapers integrate with social media platforms for content distribution, engagement, and audience growth. This includes strategies for leveraging social media channels effectively.

5. **Security and Privacy Considerations**: Explore security measures implemented by e-newspapers to protect user data, prevent unauthorized access, and ensure secure transactions, especially in subscription-based models.

6. **Legal and Ethical Issues**: Investigate legal and ethical considerations related to digital publishing, such as copyright laws, content licensing, plagiarism detection, and adherence to journalistic standards and ethics.

III. PROPOSED WORK

1. News Articles:
- Covering local, national, and international news.
- Providing in-depth analysis and background information on significant events.
- Including interviews with experts, eyewitnesses, and key figures involved in the news.

2. Feature Stories:
- Exploring human interest stories, profiles of inspiring individuals, or investigative pieces on societal issues.
- Diving into cultural trends, lifestyle, and entertainment topics relevant to your audience.
- Incorporating multimedia elements like videos, photo galleries, or interactive graphics to enhance storytelling.

3. Opinion and Editorial Content:
- Publishing opinion pieces, editorials, and op-eds on current affairs, politics, and social issues.
- Encouraging diverse viewpoints and fostering constructive debates among readers.
- Inviting guest columnists or experts to contribute their perspectives on relevant topics.

4. Technology and Science Coverage:
- Highlighting breakthroughs in science, discoveries, and innovations across various fields.
- Explaining complex scientific concepts in accessible language for the general audience.
- Reviewing gadgets, software, and emerging technologies, along with their implications for society.

5. Local Events and Community News:
- Featuring community events, fundraisers, and initiatives happening in your area.
- Spotlighting local businesses, artists, and grassroots movements making a difference.

- Providing practical information such as weather updates, traffic reports, and local service listings.

6. Continuous Innovation and Adaptation:

- Monitoring audience feedback, analytics, and industry trends to refine your content strategy.
- Experimenting with new formats, storytelling techniques, and distribution channels to stay relevant and engaging.
- Collaborating with multimedia producers, designers, and data analysts to enhance the visual appeal and interactivity of your e-newspaper.
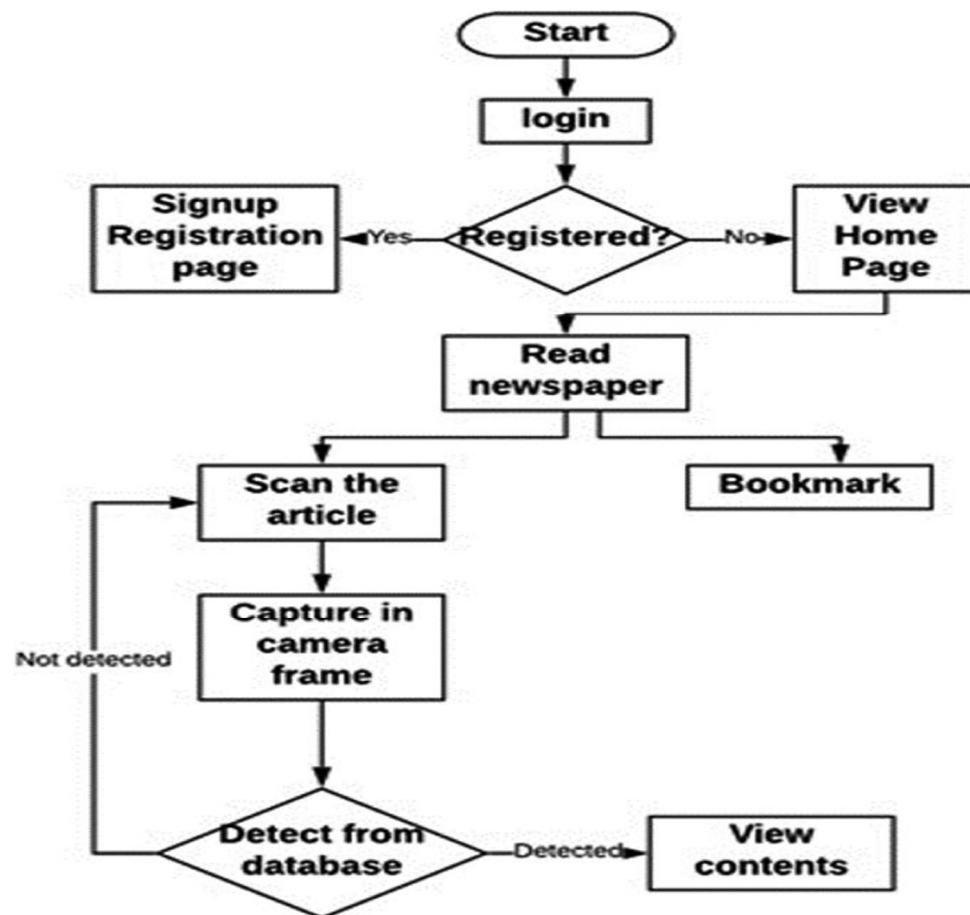

Fig. 1: the flow of proposed work of enews paper edition

IV. PROPOSED RESEARCH MODEL

1. A replica of the online edition

Unlike the previous presented edition, which is based on the print-ready file, the replica of the online edition is assembled as for the online edition, i.e., by the online production staff and through automation. The content can be selected from different locations: from the content database where tagged material is matched to the output channel automatically,from the content catalogue of the printed edition, directly from the edited printed edition documents, or written directly into the edition templates by the online journalist. At present, most online newspapers still consist of content that is selected mainly from the printed edition, although the number of reporters working exclusively on the online edition is increasing.

2. Produced as a unique edition

In this model, the e-paper edition is approached as a unique product. The content of thee-paper will be produced exclusively for this product or re-edited from material in the existing content news flow, not from another edition as a secondary media channel. Production staffs are assigned exclusively to producing this edition, and the layout and for-mat are designed to fit the e-paper device through the use of templates.

3. Produced as a part of multiple channel publishing

One possible extension of the previously mentioned workflow is to treat the e-paper edition as one of several publishing channels (e.g., print, online and e-paper), i.e., multiple channel publishing, shown in Figure 7. The key to an efficient system is that all material is stored at one location: moving and still images, text, etc. The (multi-channel) system consists of a logical unit, one or more databases, where the material could either be dependently or independently stored according to output channel, pulled when needed by each department, and formatted for each specific channel.
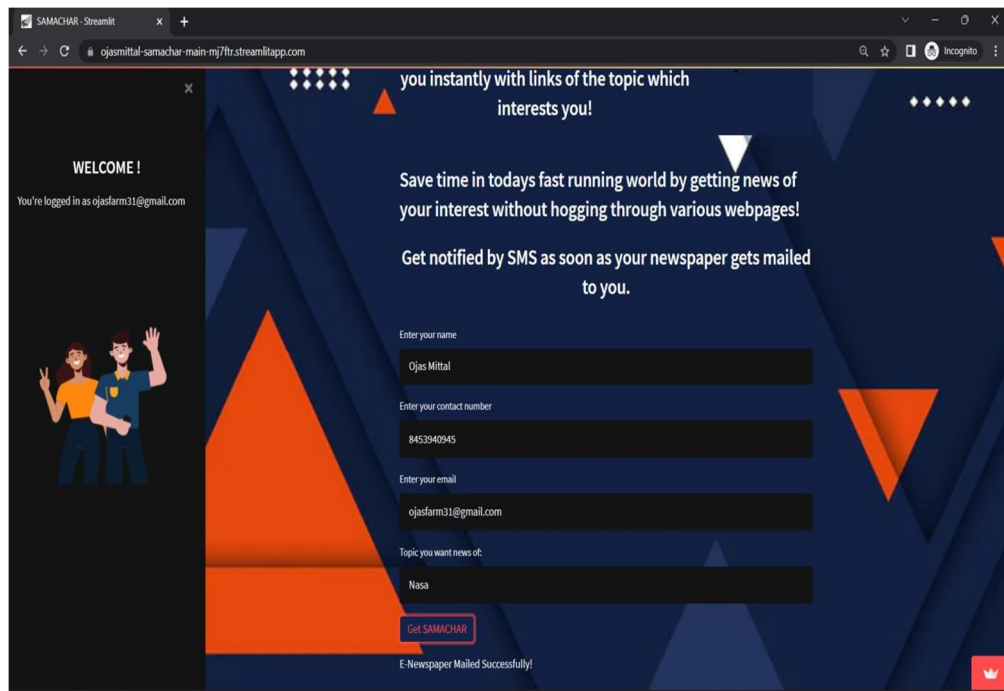

Fig.2 : storing logging data

V. PERFORMANCE EVALUATION

1. **Audience Reach and Growth:**
   - Measure the total number of subscribers or registered users over a specific period.
   - Analyze trends in website traffic, page views, and unique visitors.
   - Assess the growth rate of your social media followers and email subscribers.

2. **Content Quality and Variety:**
   - Evaluate the diversity and relevance of content categories (e.g., news, opinion, lifestyle).
   - Assess the quality of writing, journalism standards, and accuracy of information.
   - Monitor reader feedback, comments, and engagement metrics (likes, shares, comments).

3 **Technology and Innovation:**
   - Assess the adoption of innovative technologies (e.g., AI-driven content personalization, interactive features).
   - Evaluate the integration of multimedia content (videos, podcasts, infographics).
   - Monitor trends in digital publishing and competitive landscape.

4. **Feedback and Continuous Improvement:**
   - Solicit feedback from readers, subscribers, and stakeholders through surveys or feedback forms.
   - Implement a process for continuous improvement based on feedback and performance data.
   - Regularly review and update performance metrics to align with business objectives and industry benchmarks.

VI. RESULT ANALYSIS

During the last decade, the number of the Internet users worldwide has been increased substantially. As per the most recent report released by Statista.com, the number of internet users worldwide was 3.9 billion, up from 3.65 billion in 2017. An increased utilisation of smart phones and computers has given people the opportunity to use the internet more frequently and with more convenience. Social networking is now considered as one of the most popular online activities, as based on active use, Facebook is the most popular online network.

There were more than 2.2 billion monthly active Facebook users as of the third quarter of 2018, accounting for nearly half of the world's internet users. The advancement of internet also influenced and developed a new way to print media. It has contributed to the emergence of a new situation where many newspapers and magazines have started to publish their online editions which have brought the whole world on a reader's desktop/palm .

The reading habits of newspapers have now seen different platforms from its print parent. In the light of these developments, this research study tends to find out whether or not online newspapers can be seen as a new genre distinct from its print parent.

As revealed by its nature, the study undertook two English newspapers published from Delhi-NCR for 45 days and analysed to find out the difference in the news content of the print version and their web counterparts in terms of the "lead news stories" appeared in the print version of the first page of the newspapers. The study thoroughly examined the difference in content of the lead news stories, placement of the lead news stories of print version as well as online version, and the contextual elements presented in both the versions.

This study of newspapers and their web counterparts is very significant for a country like India where population of internet users is growing rapidly. Hence the research findings and conclusion is very significant not only for scholars but it is quite relevant to policy makers, students and media professionals at large.

VII. CONCLUSION

Today, paper remains the most popular document medium because of its credibility, tangibility, ease of use, flexibility, portability, and compatibility which has made it difficult to replace. Even with the prevalence of computers and online documents, the paperless office is more distant than when it was proposed.

With paper a document flowing at a faster pace than ever, the need for more document management system becomes increasingly inevitable. Sheridan believes that E-paper will eventually be able to make power hungry desktop displays obsolete and help make heavy back-breaking textbooks something school children might learn about in a history class on their lightweight E-readers.

Though new technologies are misperceived as total replacements for old ones, when in fact, the introduction of a new technology can simulate a synergy between old and new, we should reconsider the argument to completely replace all paper documents with electronic documents, and consequently, we predict a co- existence between paper and E-paper.

While we may be familiar with digital paper because of its widespread use among eBook readers, the technology's flexibility allows for far more advanced applications. The paperless office of the future, in contrast to speedy autos and personal teleporters, may not be so far-fetched in the end. It all begins with a clean, fresh workspace.

Because of its plausibility, tangibility, simplicity, flexibility, portability, and compatibility, paper remains the most preferred document ment medium, making it difficult to replace. The paperless workplace is still a long way from its original ideal, despite growing usage of computers and online documents.

VIII. FUTURE SCOPE

The E-paper will be embedded as a cylindrical tube (about 1 centimeter in diameter or 15 to 20 centimeters long), that a person can comfortably carry in his or her pocket. The tube will contain a tightly rolled sheet of E-paper that can be spooled out of a slit in the tube as a flat sheet, for reading, and stored again at the touch of a button.

Information will be downloaded (there will be a simple user interface) from an overhead satellite, a cell phone network, or an internal memory chip. The document reader will be used for E-mail, the internet, books download from a digital library, technical manuals newspapers, magazines etc. anywhere in the planet. It will cost quite less than $10, and nearly everyone will have one. The surest way to produce the future of E-paper to invent it. E-paper is rich in potential.

Judging by recent developments in terms of display size and power consumption in E-readers coming to market, the future of E- paper technology is bright. In 10 to 20 years, consumers might see large E-paper modules that are as thin and as flexible as magazines are today, with display brightness approaching that of conventional print.You might click on an image in a story, and it will provide video or animation.

IX. REFERENCES

[1] Lawson, B. and Sharp, R, 2011. Introducing html5. New Riders.

[2] BRIGHT, P., 2014. HTML5 specification finalized , squabbling over specs continues. From https://arstechnica.com/information-technology/2014/10/html5-specification-finalized-squabbling-over-who-writes-the-specs- continues/

[3] R. Minto, 2008. The genius behind Google's browser. From https://www.ft.com/content/03775904-177c-11de- 8c9d-0000779fd2ac

[4] M. Kovatsch, M. Lanter and S. Duquennoy, 2012. Actinium: a Restful runtime container for scriptable Internet of Things applications, 2012 3rd IEEE International Conference on the Internet of Things, Wuxi, 2012, pp. 135-142.

[5] Chromium Blog. Google. 2011. HTML5 specification finalized, squabbling over specs continues. From https://blog.chromium.org/2011/11/game-changer-for-interactive.html

[6] Teixeira, P., 2012. Professional Node. js: Building JavaScript based scalable software. John Wiley & Sons.

[7] K. Lei, Y. Ma and Z. Tan, "Performance Comparison and Evaluation of Web Development Technologies in PHP, Python, and Node.js," 2014 IEEE 17th International Conference on Computational Science and Engineering (CSE), Chengdu, China, 2014, pp. 661-66. [8] Gackenheimer C., 2015. Introducing Flux: An Application Architecture for React.
In: Introduction to React. Apress, Berkeley, CA
 [9] Eisenman, B., 2015. Learning React Native: Building Native Mobile Apps with JavaScript. " O'Reilly Media, Inc.".
[10] Ramos, M., Valente, M.T. and Terra, R., 2018. AngularJS performance: A survey study. IEEE Software, 35(2), pp.72-79.
[11] Chen, Z., 2018. HTML5 Hybrid Mobile Application: Building mobile applications using web technologies with Ionic.
 [12] El Omari, M., Erramdani, M. and Filali, S., Getting Model of MVVM pattern from UML Models.
 [13] Angular Official Blog., 2018, July. AngularJS to Angular Concepts:
 Quick Reference From https://angular.io/guide/ajs-quick-reference

[14]   https://epaper.thehindu.com/reader

[15]   https://newspaper.pudhari.co.in/

[16]   Usha Kosarkar, Gopal Sakarkar, Shilpa Gedam (2022), "An Analytical Perspective on Various Deep Learning Techniques for Deepfake Detection", *1st International Conference on Artificial Intelligence and Big Data Analytics (ICAIBDA),* 10th & 11th June 2022, 2456-3463, Volume 7, PP. 25-30, https://doi.org/10.46335/IJIES.2022.7.8.5

[17]   Usha Kosarkar, Gopal Sakarkar, Shilpa Gedam (2022), "Revealing and Classification of Deepfakes Videos Images using a Customize Convolution Neural Network Model", *International Conference on Machine Learning and Data Engineering (ICMLDE)*, 7th & 8th September 2022, 2636-2652, Volume 218, PP. 2636-2652, https://doi.org/10.1016/j.procs.2023.01.237

[18]   Usha Kosarkar, Gopal Sakarkar (2023), "Unmasking Deep Fakes: Advancements, Challenges, and Ethical Considerations", *4th International Conference on Electrical and Electronics Engineering (ICEEE)*,19th & 20th August 2023, 978-981-99-8661-3, Volume 1115, PP. 249-262, https://doi.org/10.1007/978-981-99-8661-3_19

[19]   Usha Kosarkar, Gopal Sakarkar, Shilpa Gedam (2021), "Deepfakes, a threat to society", *International Journal of Scientific Research in Science and Technology (IJSRST)*, 13th October 2021, 2395-602X, Volume 9, Issue 6, PP. 1132-1140, https://ijsrst.com/IJSRST219682

[20]   Usha Kosarkar, Prachi Sasankar(2021), " A study for Face Recognition using techniques PCA and KNN", Journal of Computer Engineering (IOSR-JCE), 2278-0661,PP 2-5,

[21]   Usha Kosarkar, Gopal Sakarkar (2024), "Design an efficient VARMA LSTM GRU model for identification of deep-fake images via dynamic window-based spatio-temporal analysis", Journal of Multimedia Tools and Applications, 1380-7501, https://doi.org/10.1007/s11042-024-19220-w

[22]   Usha Kosarkar, Dipali Bhende, " Employing Artificial Intelligence Techniques in Mental Health Diagnostic Expert System", International Journal of Computer Engineering (IOSR-JCE),2278-0661, PP-40-45, https://www.iosrjournals.org/iosr-jce/papers/conf.15013/Volume%202/9.%2040-45.pdf?id=7557